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FIG. 80.—FINE COPPER EWER.

(In the Victoria and Albert Museum, South Kensington.)

Frontispiece

CHATS ON OLD COPPER AND BRASS

BY

FRED. W. BURGESS

AUTHOR OF "CHATS ON OLD COINS," ETC.

WITH FRONTISPIECE AND ILLUSTRATIONS FROM PHOTOGRAPHS AND WASH DRAWINGS

NEW YORK

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PREFACE

THE collection of old metal may at first sight appear a somewhat unattractive hobby; a moment's reflection, however, brings to mind the wonderful art treasures of metal in our museums, gathered together from many parts of the world; not necessarily of the precious metals, for many of the most cunningly contrived objects of antiquarian research are of copper in one or more of its numerous forms of alloy.

Copper is the basis of so many alloys of which metallic curios are formed, that in its combination with other metals it gives the collector an almost inexhaustible field of research. It was the metal of the ancients, which in combination with tin gave them that useful metal with which to fashion weapons of offence and defence, and later, as the Bronze Age advanced, utilitarian objects of household economy.

Collectors find the Age of Metals unfolding as they arrange their collections with orderly sequence, and thereby trace the progress of artificers throughout the periods which have intervened since the first bronze celt was moulded to the present day.

Although this is the Age of Iron and the numerous materials which metallurgical research and scientific skill have produced, copper, and brass in its varied forms, are still prominent, and the almost inexhaustible supply of copper with which Nature has provided us is still being drawn from.

In this work the curios and artistic objects of use and ornament which have come down to us, contributed by craftsmen of many ages and of many countries, are passed in review. The object of so doing has been to awaken still greater interest—if that is possible—in the collection of copper and brass, and to preserve to futurity metal objects from which the utilitarian purpose of their manufacture is fast waning—if not already gone.

Although the rarest and most costly objects are to be found in museums and the galleries of the wealthy, there are many still in the homes of the people, and there are many who seek and obtain pleasure and delight from the collection of the curious and the beautiful who cannot afford the unique specimens which are so costly. To such this book should appeal, for the descriptions and the illustrations have been drawn from many sources, and their selection has by no means been confined to the rarer types.

The illustrations are reproductions of photographs which have been willingly furnished by owners of collections and museum authorities. A large number, too, have been specially drawn for this work by my daughter, Miss Ethel Burgess.

I gratefully acknowledge the kindness of those

who have allowed me to make use of objects in their collections. I would especially bear testimony to the courtesy of the Directors of the British Museum who have authorized their printers, The University Press, Oxford, to furnish blocks of some of the most interesting metal objects in the Galleries. The Director of the Victoria and Albert Museum has granted facilities for the reproduction of some of the beautiful metal-work at South Kensington.

My thanks are especially due to Mr. Guy Laking, M.V.O., F.S.A., who, although in the midst of the removal of the London Museum from Kensington Palace to its new home at Stafford House, has kindly supplied several photographs of scarce metal objects. Special drawings have been made of several representative objects in the Guildhall Museum, through the courtesy of the Curator.

Permission has been granted to reproduce photographs and illustrations of objects in several of the more important provincial Museums, and in several instances some very interesting information has been given by the Curators. Among others I should like to give the names of Mr. F. R. Rowley, Curator of the Royal Albert Memorial Museum at Exeter; Mr. T. Sheppard, F.G.S., F.S.A.Scot., Curator of the Municipal Museum, Hull; Dr. Hoyle, Director of the National Museum of Wales, Cardiff; Mr. J. A. Charlton Deas, F.R.Hist.S., Director of the Museum and Art Gallery, Sunderland; Mr. Thos. Midgley, F.R.Met.S., Chadwick Museum, Bolton; Mr. R. Rathbun, Assistant Secretary of the United

States National Museum, Washington ; and the Town Clerk of Winchester.

I am further indebted to Messrs. Glendining & Co., Ltd., who have given me permission to reproduce some beautiful Oriental metal-work which has recently passed under the hammer in their London Galleries ; also to Messrs. Herbert Benham & Co., for a drawing of the copper ball and cross of St. Paul's ; and to Mr. Amor, of St. James's, S.W., The Edward Gallery, of King Street, S.W., and Mr. Chas. Wayte, of Edenbridge, who have given me photographs of rare pieces of art metal-work.

I have endeavoured to refrain from technicalities or dry descriptions ; but some of the chapters have necessarily a touch of the workshop and the foundry about them. I can assure my readers, however, that the "metallic ring" is inseparable from copper and brass, and that the pleasures of possession will be added to by the better understanding it will impart to those who collect and admire similar objects to those referred to in this work.

FRED. W. BURGESS.

LONDON, 1914.

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GLOSSARY

GLOSSARY

Astrolabe.—The astrolabe is an instrument which was largely used in taking the altitude of the sun or stars at sea. It was well known to the Greeks, and takes its names from two Greek words, meaning *a star* and *to take.* Perfected by the Arabs, the instrument was introduced into Europe about the tenth century. It is said that the most famous examples are to be seen in the museums at Madrid and Florence. There is one in the British Museum, which was made for Henry, Prince of Wales, in 1574.

Barrow.—Mounds in which bronze celts, knives, spear-heads, and food receptacles are found along with the remains of chieftains and others of the prehistoric peoples once inhabiting this country. The term "barrow" originally denoted a "little hill." Round barrows are the most common form, although some are oval and some of the "long barrow" type. The methods of burial differed, but in most instances implements of stone or bronze as well as vessels of pottery and some trinkets belonging to the dead were usually placed near to the body.

Betel-Nut Boxes.—The beautifully ornate boxes, chiefly found in India, made for holding the betel-nut and the shell lime used by the natives who chew the leaves and nut of the areca palm.

Bidri Metal.—The metal objects known as bidri are made of an alloy of copper-zinc and lead, damascened with silver, showing a peculiarly striking contrast in black and white. The villages round Lucknow are famous for this curious and effective inlaid metal work.

Brass.—An alloy of copper and zinc. Early brass was copper mixed with calamine melted in a crucible. The ancient form of alloyed metal employed by the Romans was copper and tin, which, although frequently termed "brass" is more correctly defined as bronze (see Bronze). The greater the proportion of zinc the lighter the colour; but the addition of an extra quantity of zinc reduced the tenacity and ductility of the metal.

Brasses.—The term brasses is applied (in antiquarian and curio metallurgy) to the monumental brasses which as early as the first half of the thirteenth century replaced the older effigies, such as those of the Crusaders, which may be seen in the Temple Church, in London. The brasses, of which many rubbings have been taken, include the large brasses, covering nearly the whole of their tomb flag, and the small brasses on which were engraved emblems, escutcheons, and inscriptions, inset into large slabs of marble or stone, ornamenting rather than constituting the covering of tombs.

Brazier.—Primarily a pan for holding burning coals. The brazier was in the fifteenth and sixteenth cen-

turies a domestic appliance for keeping hot dishes for the table, some very interesting examples of an ornamental character, doubtless used for that purpose, being referred to in Chapter VIII. The brazier, so called to-day, is a tripod open fire chiefly used out of doors in some open space.

Bronze.—The bronze of the ancients consisted chiefly of pure copper and an alloy of tin. In those very early days the compounding and mixing of the metals must have been done largely by experience and "rule of thumb." It was before the days of metallurgical research and before the chemistry of metals was understood. As yet there was no formula. Curiously enough the proper nomenclature of metals has never been formulated, and "bronze" is the term still applied in a very haphazard way to various alloys.

Quite recently a very able lecture was delivered by Dr. Rosenhain, of the National Physical Laboratory, on the "Nomenclature of Alloys" at a meeting of the Birmingham Section of the Institute of Metals. Every one, he told us, described metals "at his own sweet will," and for the most part by misleading terms. He suggested in reference to copper-bronze alloys that "copper-zinc" might denote an alloy with more copper than zinc in it, and "zinc-copper" when the former metal was present in a greater degree. He thought "tin-copper" would serve as a fairly wide definition of modern bronze. In such bronzes aluminium is now generally added. Other scientists have suggested the definition of bronze by chemical numerals, thereby indicating their contents with

more exactitude. At present, however, the term bronze is very elastic.

Buckler.—The old English name *bocler* denoted a shield with a boss. It was worn on the left arm; used in the Middle Ages to parry blows rather than intended to act as a cover for the body like the larger and more cumbrous shields.

Chattie or Chatty.—A porous earthenware vessel used in India for cooling water and other purposes.

Chaufferette.—A spherical metal vessel in the interior of which was a small chain, from which was suspended a cup in which could be placed a piece of red-hot metal or charcoal. It was usually a hand-warmer; some chaufferettes, however, were larger, almost like small stoves. The name is derived from a table stove or small furnace, literally a cylindrical box of sheet-iron, the word coming from the French *chauffer*, to heat.

Circe-Perdu Process. — The Japanese have been wonderfully clever in their manipulation of metals, especially considering the very primitive appliances they used in the early days. Some of their most remarkably intricate bronzes were fashioned and modelled in wax, delicately tooled, hardened a little, and then covered over with layers of fine clay until the mould became strong enough. The clay mould when dried was heated until the wax ran out, leaving a smooth and beautifully finished mould in which the bronze metal could be poured, the clay being broken away when it was cold. Great skill and at the same time much patience were needed to produce such charming effects. The bronzes of old Japan were

frequently inlaid with fine and delicate tracery in silver and gold. Up to comparatively recent times beautifully modelled ornaments were fashioned by such laborious processes, and even now by more modern methods much labour is expended on their production.

Counters.—Counters have been used in card games from quite early times. They were frequently of engraved metal. In the reign of James I, we are told by Horace Walpole, one Nicholas Hilliard was licensed for twelve years to engrave card counters on which was the Royal portrait. In later reigns similar counters were so engraved. Those of the time of Queen Anne bore a great resemblance to the obverse of the then current coins. Sets of counters were frequently supplied in metal boxes, the exteriors of which were often decorated by engravings. It should be clearly understood that metal card-counters—old and modern—are quite distinct from commercial counters or jettons.

Couvre de Feu.—The French term, literally, cover of the fire, became the name of the metal shield or cover with which the fire was shut down in the days of the Norman kings. From the same root term the English curfew is derived. It was the curfew bell that sounded the signal for the *couvre de feu* to be brought out and lights and fires to be extinguished. These metal plates, so frequently engraved all over, are among the rarities of domestic curios (see p. 113).

Damascene.—The process of inlaying steel or other metal work with silver or gold beaten into the incised metal. To damascene (also spelled damasken) was

a process first emanating from Damascus—hence its name.

Dialling.—A dial plate is made by fixing to a flat surface a stile or gnomon, which forms with the horizon an angle equal to the latitude of the place in which it is to be used. When the gnomon is in position a line is drawn upon the surface of the plate so that the shadow of the stile falls exactly upon it at noonday, the plane through the stile and the sun coinciding with the meridian. It cannot be too clearly understood by users of old sundials that dial plates used in any other latitude than that for which they were constructed must necessarily be inaccurate.

Ember Tongs.—These little tongs were formerly used to take up the hot embers from among the ashes of a dying fire. They were constantly in use in the seventeenth and eighteenth centuries, many being decorative, the handles often being fashioned to serve the purpose of a pipe stopper.

Enamels.—The enamels applied to copper or brass are glass coloured with oxides of metals, producing blue, green, violet, red, and other shades. These when fused adhere to the metal surface and are very lasting. Various processes have been adopted, especially in the fine arts. The principal older processes are champlevé, cloisonné, and Limoges. In the first named the spaces to be filled in with enamels are cut into the metal foundation; then, when the enamels have been fired, they are rubbed down and polished. The cloisonné process, chiefly practised in the East, consists of small cells or cloisons formed of wire filled with the requisite

colours. Limoges enamels, the finest period of which is placed in the sixteenth century, were formed by a ground of enamel painted over, chiefly with classical subjects.

Opaque enamels on, usually, a convex copper disc or plate, were the work of later craftsmen. At Battersea and Bilston in England, towards the close of the eighteenth century, many small boxes and trinkets (see p. 356) were produced. The enamels of recent date applied to utilitarian objects and cooking vessels are seldom fixed upon a ground-work of copper—iron or steel being the usual base. In jewelry and small trinkets enamelling on copper is still practised, many such objects being of Oriental origin.

Fibula.—A small brooch or buckle. Many of the beautifully fashioned fibulæ have been found among the remains of Roman London, a large number being on view in the Guildhall Museum.

Gipciere.—A kind of pouch formerly worn at the girdle, an early type of purse. The name is sometimes spelled *gipser*.

Hookah.—The name given to the bottle through which tobacco smoke is passed. In smoking with a hookah the smoke is cooled by being made to pass through water.

Latten.—The name is primarily derived from the nature of the material—thin sheets. The brass or latten brass was formerly used chiefly for making church utensils. Black latten consists of milled sheets of brass, composed of copper and zinc; roll latten, of metal polished on both sides; and white latten, of brass and tin.

Meander.—A term applied to the decorations on Japanese and other bronzes. To wind, to twist, meandering like the winding river Maeander, in Phrygia, from which the proverbial term is derived.

Mirrors of Bronze.—The bronze mirrors of the Romans were given their reflective power by using an alloy of antimony and lead, a combined metal which took a highly reflective polish; the backs, handles, and frames were of bronze.

Mortars.—Mortars such as those referred to on p. 226 with accompanying pestles, were commonly in domestic use from the sixteenth to the eighteenth centuries. In later years they were employed chiefly in the preparation of drugs, but more recently they have been superseded by the modern way of preparing spices and other compounds by machinery. The form of the vessel may be described as an inverted bell, the substances therein being pounded or rubbed with the pestle.

Patina.—A term expressive of the colour or encrustation which is imparted to works of art by age. It is used chiefly in reference to the beautiful green formation which covers ancient bronzes, shading from light green to deep brown. This crustation consists of basic copper carbonate, the result of exposure to the air. It is chiefly found on bronzes, the alloy of which is mostly of tin and very little zinc. The patina or patine is also the name given by the Romans to a shallow basin used for domestic purposes.

Pilgrims' Signs.—The symbols or signs worn by pilgrims when visiting one or other of the famous

shrines in this country in mediæval days were distinct from the crests or badges of wealthy patrons which were at one time worn pretty generally as indicating on whose service the journey they were making was being performed. Pilgrims' signs were worn on the outward journey chiefly as protective amulets; on the return journey mostly as proof of the pilgrimage, such signs being purchased at or near the shrines to which homage had been paid. The chief shrines in this country were those of St. Thomas à Becket at Canterbury, and Walsingham Priory in Norfolk, where Our Lady of Walsingham was held in high repute.

Weather-Vane.—The vane denotes any flat surface attached to an axis and moved by the wind, usually applied to some elevated object for the purpose of telling which way the wind blows. A strip of metal cut to some fanciful form and placed upon a perpendicular axis around which it moves easily.

I

THE METAL AND ITS ALLOYS

CHAPTER I

THE METAL AND ITS ALLOYS

Ancient bronze—The bronzes of Greece, Rome, and Eastern nations—Copper for enamels—The brass of commerce—Bell metal—The sources of copper—The making of brass—Copper as an alloy—The characteristics of metals.

THE coppersmith has taken a prominent place among the craftsmen of all nations, and at all periods, and in not a few instances he has been acknowledged as an artist of no mean order. The material upon which he has worked has been copper and its alloys and compounds. From this metal have been produced many valuable antiques, and among the work of the coppersmith of more recent days there are objects of intense interest and of great beauty. In this work many collectable objects have been classified, and in the different groups of metal-work referred to attention is drawn to these beautiful and sometimes quaint reminders of past generations, and also to some of the most notable non-collectable metal-work which may be seen and admired in museums and art galleries, and to a few of the copper monuments, memorials, and historic relics which are gazed at by the curious, oftentimes

without thought of the materials of which they are composed.

Ancient Bronze.

The raw material, copper, smelted and beaten or poured from a crucible into moulds, was in more ancient times used in its unalloyed purity—and it is still used in that state. It was, however, soon discovered that copper might be improved for many purposes by mixing with it other metals possessing different properties. The prehistoric peoples who lived in Britain, and in other countries within reach, soon added tin, which was found in Cornwall quite near to the surface, and was from early times sold to Phœnician traders, thereby producing bronze. It is of this metal that most of the much valued curios of the so-called Bronze Age are made. Those who fashioned them were clever manipulators of the alloyed metal, and by processes now little understood were able to temper tools and weapons and to give them keen-cutting edges. Our museums are full of spear-heads, celts, axes, and palstaves of bronze, which were cast in moulds of stone cut to the required shapes by those primitive workers in metal, who used simple crucibles in which it was melted.

The prehistoric bronzes, some examples of which are referred to in another chapter, are the earliest collectable curios formed of metal. They include implements of war and of the chase and some domestic utensils and cooking vessels. To these useful objects must be added ornaments and trinkets

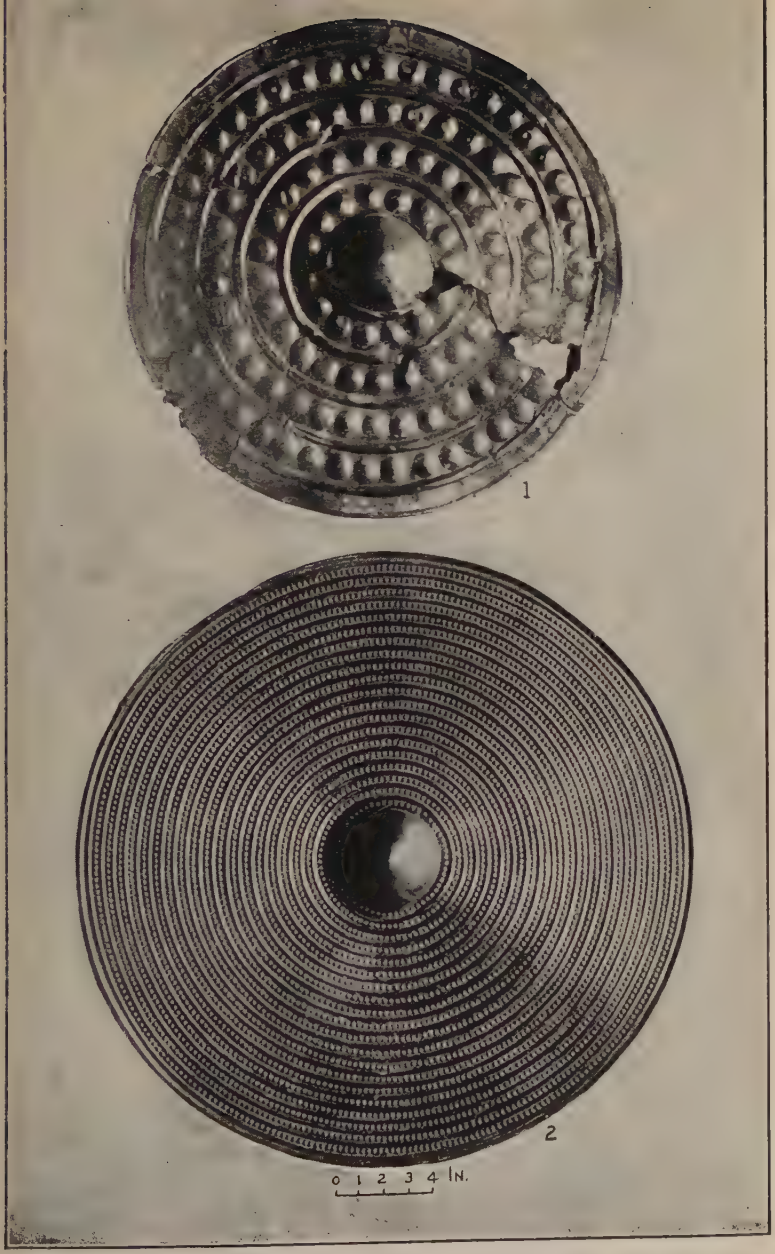


FIG. 2 (1).—BRONZE BUCKLER FROM THE THAMES VALLEY.

FIG. 3 (2).—ANOTHER BUCKLER FROM ABERYSTWYTH.

(*In the British Museum.*)

of bronze, so many of which have been found in the barrows and burying-places of prehistoric races.

The knowledge of bronze appears to have been widespread. It was understood by those who dwelt in this country, by the inhabitants of European countries, by Eastern nations, and by the Egyptians, who left such wonderful monuments behind them, giving evidence that they knew how to impart a knife-like edge to their tools of bronze.

Bronzes of Greece and Rome and Eastern Nations.

The ancient bronze of prehistoric days must not be confused with the metals or compounds of copper and its alloys which enabled the Greeks to produce such wonderful statues. They learned to impart hardness to copper, and wrought much delicate handiwork, much of which has perished; but enough has been spared to confirm classic history and to enable us to realize something of their conceptions of the old gods and personified hopes and aspirations. In like manner the wonderful bronzes of China and Old Japan were wrought; the metal-worker's art in those countries goes back many centuries. Some of the more delicately chiselled figures and groups were first modelled in wax upon an iron core, the mould being then formed of soft clay. When the clay was baked the wax melted, and running away through prepared outlets, left a smooth cavity into which the bronze was afterwards poured. When the metal was cold the clay would easily be broken away, and the object, at the moulding of which we often marvel, made perfect.

In course of time such bronzes have been coated over with a beautiful patina of green, that natural finish which age can alone impart. It is in that state so many of the bronzes of Grecian sculptors are found, and it is covered with patina of many delightful shades that we buy the metallic curios from China and Japan.

Copper for Enamels.

In the days when so many beautiful ecclesiastical ornaments were fashioned, copper was the foundation used by mediæval artists as the base of their exquisite enamels. These beautiful objects are especially referred to in Chapter XVIII, where reference is also made to the enamels of Eastern countries, in the making of which brass was frequently used as the foundation. Copper has been found suitable as the groundwork upon which super-finishes have given that superiority and attractiveness associated with many of the fine arts. It was suitable for gilding over and for decorating with precious stones. Copper was also frequently used by painters, its smooth surface being regarded as an excellent material on which to work. As an example, some of the religious pictures, especially miniatures, were painted on copper, instead of on wood panels.

The Brass of Commerce.

Many speak of brass as a metal apart from copper, yet the brass of commerce, worked up in many forms, is only a composite metal of which copper is the basis. The popularity of pure copper as the mate-

rial from which household utensils and many constructional objects of use and ornament were made in the past continued unabated until metallurgical chemists discovered how, by using an alloy of zinc, the metal we call brass could be cast, rolled, and otherwise manipulated. Among the advantages claimed for brass is that it has a harder surface and is more resisting than copper. From the days of Queen Elizabeth onward it was much favoured for domestic vessels, and even at the present time it is used to some extent; there has, however, always been a concurrent use of copper.

Bell Metal and Other Alloys.

There is yet another important alloy, which from its chief use takes the name of bell-metal; its companion alloy is gun-metal. In the mixing of these metals special alloys are aimed at according to the object in view, that is to say, the ingredients vary, but, broadly defined, the copper and its alloy tin used in bell-metal are in the proportion of three to one. The metal was in the past used for those much employed articles of commercial and domestic use, mortars, in addition to the founding of bells. Bell-metal was also the material of which weights and measures (especially the standards kept in many of the old cities) were chiefly made (see illustrations and references thereto in Chapters X and XI).

The Sources from which Copper is Derived.

Copper seems to have been very widely distributed all over the world, a fact that has contributed to its

general use. At one time a local metal employed in a pure state and in conjunction with alloys, chiefly where it was mined, it is now brought to the metal-founder from other parts of the world. Although vast quantities of copper are now imported into England, it was from British mines that the supply was drawn in days gone by. The Britons understood its use, no doubt finding it out by accident, just as the natives of many other countries have done. Copper, as evidenced by the marvellous Benin bronzes, was known in Central Africa long ago. The mines at Mansfield, in Germany, are the oldest in Europe, and there workers have been digging up copper for seven centuries.

The collector of old metal objects naturally takes the greater interest in well authenticated specimens known to have been fashioned in districts once famous for their copper mines. Unfortunately, the Cornish mines produce little ore now. When the Romans worked them they obtained copper quite near to the surface; but such easily mined ores have long been cleared.

Copper smelting was carried on in Cumberland and Northumberland in days gone by. In the seventeenth and eighteenth centuries copper was smelted in Yorkshire and Lancashire. Then we read of the reopening of old Cornish mines and of furnaces being erected in Bristol. The mines of Anglesea are less known, although they were once very active. South Wales has for many years past been closely identified with copper smelting, and rolling mills were established in Swansea as early as 1720; and although the better knowledge of metallic chemistry

enables manufacturers to produce copper more economically than in days gone by, the old principle of crushing, calcining, roasting, and washing the ore, although improved by modern machinery, is still adhered to.

As with many other industries, the invention of the steam-engine was a boon to the owners of copper mines in Cornwall, many being flooded towards the end of the eighteenth century. With the steam-engine to work them, pumps were put in operation, mines were cleared, and for a time at any rate ore was procured and renewed activity was visible in many British centres. In those days many of the things we now regard as curios were being made. As with many other raw materials the value of copper steadily advanced, for as trade and commerce grew, immense quantities were used up for sheathing ships' bottoms, roofing buildings, for engravers' plates, and for the rolls used in the printing of calicoes. Other sources of supply have been found, for the chain extending from Land's End to Dartmoor no longer serves. The famous Parys Mines are no more, and it is from foreign countries the supply comes. Some of our Colonies have proved rich in ores, such, for instance, as South Australia, where it is said an early settler examining the burrow of a wombat found the green mineral, that incident leading to the opening of mines yielding vast quantities of copper ore.

The Making of Brass.

The brass of commerce, rolled in sheets, drawn in

rods and wire, and cast in ingots ready for the founder, is, as it has been stated, a composite metal, very well suited to many purposes. During the sixteenth century much progress was made in metal-founding. The Worshipful Company of Founders was busy. Many "battery" works were set up in England, and there brass was hammered or battered into shape. Thus brass-workers were engaged in making useful pots and pans, now in their much worn state eagerly sought after by the collector. Some worked with the ladle and crucible, others with the hammer and anvil or wood block.

The earlier brass was composed of copper mixed with calamine melted in a crucible, a process which continued until the more modern form of melting metallic zinc with copper was understood. Champion's process, by which this newer method was carried out, was kept secret for some time, but about the middle of the eighteenth century it was generally understood and the process of stamping brass became a common one in the Birmingham district.

Copper as an Alloy.

Copper, the base of so many alloys, has itself been found a useful alloy of most workable metals, not only in modern times but in years gone by. It is one of the best hardening agents in aluminium, the newer metal which is to some extent displacing copper and brass cooking pots and much ornamental metal-work. According to an expert, aluminium is tasteless, and possesses all the advantages of copper without its drawbacks. That being so, perhaps even

vessels of brass, such as may still be seen in kitchens, may soon become obsolete and pass shortly into the rôle of the museum curio. Incidentally it may be mentioned that aluminium is not altogether a new metal, neither is its use confined to civilized countries, where metallurgists have proved its advantages; for the natives of the Philippines, Borneo, and other islands in the Pacific have long used it as an independent metal, and also for the purposes of ornamenting other materials. Many of the copper and brass curios brought into this country, the products of native smiths, working far from civilized lands, are partly made of aluminium, alloyed chiefly with native copper. The natives of Borneo melt it in fireclay crucibles over a coke fire, and are very clever at producing some remarkably fine pieces of metal-work, using different metals for the same object; thus some of their daggers have brass hilts and aluminium blades. The metal-worker has frequently introduced aluminium in the decoration of copper and brass gongs, some of the older examples from Japan being extremely decorative.

The Characteristics of the Metals.

Some collectors very wisely follow up their researches after new treasures by investigating the methods of their production, and they even visit modern works where similar methods, although more advanced, are going on. Very interesting indeed is it to watch the molten metal as it is mixed and poured into moulds and made into pigs. To see the great rolling mills through which the bars

are passed, and to watch the hammering and drawing by the steam-hammer and powerful machinery, is an education which enhances the interest there is in the possession of finished goods —old and new.

It is said the brassfounder's requirements to-day are much the same as they have always been, although perhaps there are more iron moulds used and greater care is taken in their preparation. The mould must have a good surface and be composed of the right kind of iron. The best metal for the purpose appears to be one high in silica and low in combined carbon, thus securing a soft iron which will not crack when the molten metal strikes it. The science of metals is constantly being added to, and the research of chemists of recent years has done much towards improving the skill of present-day artists, most of whom, however, readily give praise to the almost intuitive skill of the artists of olden time.

The fashioning of copper and brass follows the preparation of the metal; there are many reasons why copper and its compounds and alloys have been so generally employed, one of the principal being that the ductility of copper has made it welcome wherever the hammer has been brought into play. The possibility of hammering out brass and copper, and especially the latter, is seen in the extreme fineness to which copper wire can be drawn. Hood uses the similitude when speaking of how travel improves the mind, and tells of the gradual narrowing of copper and brass as they become finer and finer, likening those who have not travelled to

the narrowed metal. Collectors of curios show characteristic traits, twofold in application. There are some who get more broad-minded the farther they travel, the more museums they inspect, and the wider their knowledge of the antiquities they admire. Others, specialists for the most part, get into very narrow grooves, confining their hobbies to some one class of goods, not always the most interesting in public estimation ; then they wonder how it is that their hobbies are not appreciated by their friends! Surely the greatest delight is in a representative collection, such as the hobby under review, which shows all the possibilities of copper and brass in their varied treatment. In the examples which have come down to us from the Ancients, in those schemes of decoration which mark clearly the work of the artists of some one country or period, and in those general collectable objects which have been brought together from everywhere, there is a liberal education :

> "Some minds improve by travel ; others, rather,
> Resemble copper wire, or brass,
> Which gets the narrower by going farther."

II

THE HUNTING GROUND

CHAPTER II

THE HUNTING GROUND

In buried cities—Turned up by the plough—Among Saxon and Norman remains—In hidden chambers—In local museums—Dealers' shops—The engraver's art.

THE multiplicity of collectable objects needed to supply collectors makes the uninitiated wonder where all these antiques come from. Countless numbers of beautiful objects have found their way into the melting-pot in the past, and what once was old has in some new form become once more a useful article, in its turn to be discarded and perhaps melted up and recast.

In Buried Cities.

The curios which have been preserved for centuries beneath the soil are often of priceless value, telling of the habits of peoples of whom history has told us little. Celts, knives, spear-heads, and food receptacles are discovered on the sites of prehistoric camping-grounds. The delicately tooled bronzes from buried cities like Pompeii and Herculaneum come to us with almost a living force in this twentieth century. As

we gaze at the wonderful beauty of their forms and the charming patina of green with which they are covered, we can almost imagine what they looked like in the hands of patrons of art in the far-off times when they were first fashioned. Our own country is full of ruins of ancient cities far below the present roadways. When the Romans built Bath it was in a hollow much deeper than the level of the modern city, and it is in these lower levels that relics of Roman Bath are found.

There is a ring of sadness in the desolation of such ancient cities as Verulamium, Cirencester, Kenchester, and similarly deserted locations where modern excavations have been going on recently. It seems curious how the very sites of such once famous places have been lost, but not strange when we remember that more recently occupied towns are but grass mounds—to-day explorers are cutting into the turf-covered mounds of Old Sarum to ascertain where its chief buildings stood. The finds on these ancient sites are varied; many of them are metallic, and although of trifling intrinsic value are prized as being authentic curios.

Turned up by the Plough.

The plough has played an important part in history, and collectors owe much to that useful implement. It has been the means of bringing to light many vessels which have been buried for centuries, for although land has been ploughed many seasons, a deeper ploughshare or more frequent ploughing on the same spot has brought nearer to

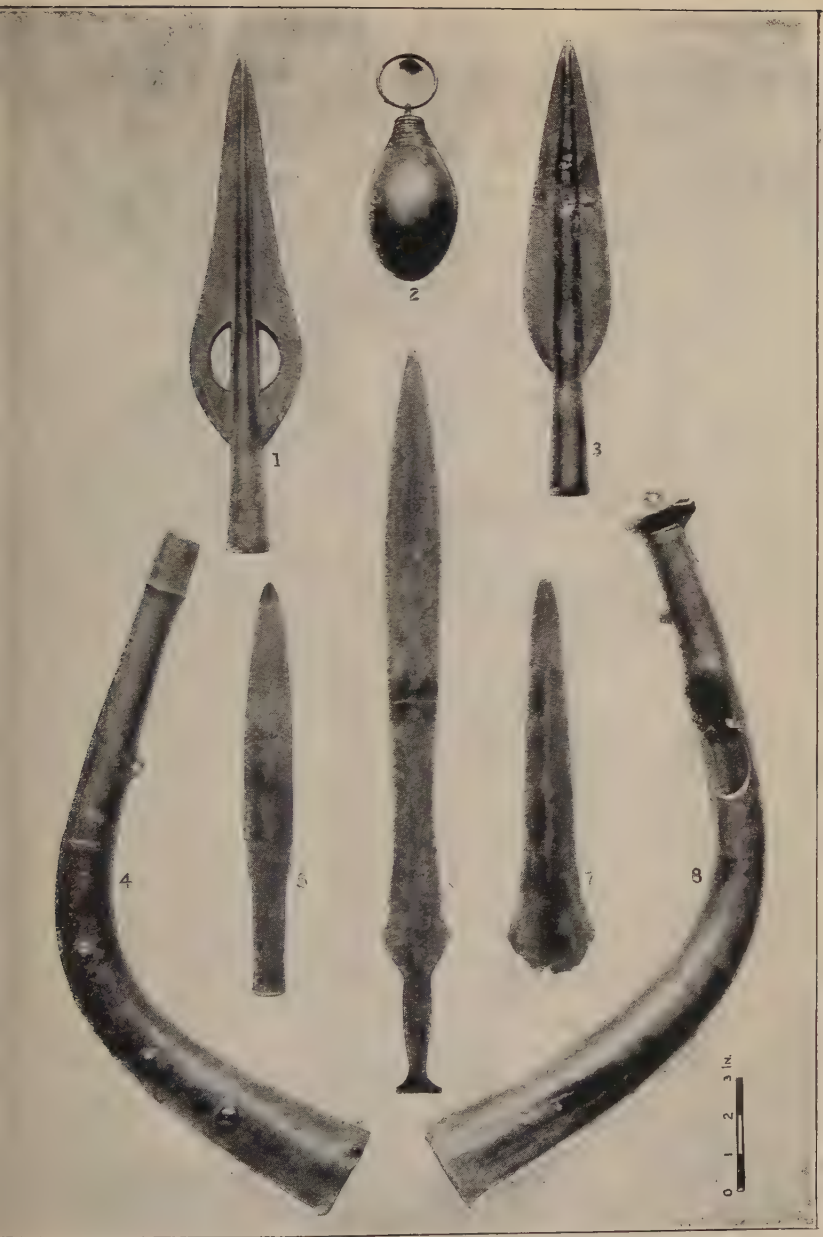


FIG. 4.—PART OF THE HOARD OF IMPLEMENTS OF THE LATE BRONZE AGE, FOUND IN KING'S CO., IRELAND.

(*In the British Museum.*)

the surface a copper vessel or an earthen jar, full of antiquarian interest. The field and the forest, and even the deserted mines, have brought to collectors of old metal many interesting relics. Until quite recently there was an old bronze caldron on view in the window of a dealer in antiques in Chester. It was the prototype of many similar vessels that have been made in later days in different parts of the country, the model on which the more modern pots or camp-kettles of the gipsies and the three-legged pots commonly suspended over the cottage hearth, until comparatively modern times, have been fashioned. It is worthy of note that the principle adopted by those early metal-workers is still observed in the more scientific construction of cooking vessels to-day. The form of the caldron was such that by applying heat under the centre the flames spread and leapt up the sides, curling as they travelled, following the lines fashioned by the coppersmiths, and heating the contents of the vessel equally. Such ancient caldrons, sometimes much worn and at others in fairly good condition, have been preserved by Mother Earth until discovered in modern times.

Among Saxon and Norman Remains.

The Saxons and Normans used metal, and the brawny arms of the smiths, and later the founders, fashioned the cooking-pots made in their day. Many metal curios, much battered by fallen masonry, have been found among the ruins of Norman castles and in some cases of the still earlier Saxon dwellings. The discoveries of curios of those periods are by no means

frequent, and it would appear as if we must now be content with storing carefully those relics already discovered. Modern restorations and excavations have brought many valuable antiquities to light, and authorities have been very careful to preserve them in county or local museums.

In Hidden Chambers.

The splendour of mediæval days when feasting in the great hall of the baron or overlord has been revealed by many noted finds. The great kitchens of those mansions were full of copper and brass, and it is from such supplies that many of the best authenticated specimens have come. Some are historical; even bronze caldrons and more modest-looking saucepans have been made to the order of some mediæval chieftain or baron.

The life of the common people of this country varied little between the days of the Norman Conquest and those of the Tudor sovereigns who held court in the houses of the nobility. The dress, costume, and rough splendour of the Elizabethan age had its effect, however, on the homes of courtiers and eventually of the common people. When the stormy times of the Civil War came there was a rude breaking up of the old order of things, and in Cromwellian days some preparation for the new which was to come. After the battlefield came the destruction of stronghold and mansion by order of the Parliament. Some escaped, and within the last century not a few domestic curios have been found during the restoration and rebuilding of old houses dating from the

time of the Commonwealth. Priests' cells and secret chambers, sliding panels and concealed cupboards, and other hidden places were the rule rather than the exception at the time of the Civil War. In some of these long-forgotten places of concealment some very interesting domestic objects in copper and brass have been found during rebuilding and restoration.

In Local Museums.

It is a moot point whether the frequent change in the ownership of curios which goes on every day, as evidenced by the auction sales, stirs up the curiosity of the collector and awakens his interest in his hobby to a greater extent than when such curios are placed on view in local museums. The fact remains that, notwithstanding the constant circulation of curios, many find a permanent home in museums. Not only do the national collections in the British Museum, and the Victoria and Albert Museum at South Kensington grow rapidly, but in almost every town of note there are local and great district museums. This latter class is instanced in the Welsh National Museum at Cardiff. There are two typical local museums in London—the Guildhall Museum and the London Museum, which has just found a new home at Stafford House. These museums stimulate local collectors, but they do not contribute to their collections. As places of reference they are invaluable, for the wider spread knowledge of antiques secured by the objects shown prevents amateurs from falling into traps and consequently becoming disheartened.

Dealers' Shops.

The shops of dealers supplement the auction-rooms. They are partly fed from them and partly by the persistent search ever going on for objects in which their owners have little interest and are willing to part with for a consideration—not always the "top price." The greater popularity of curio-hunting has caused a vigorous search of attic and cellar at the instance of dealers as well as collectors. Even the palaces of kings and queens and the houses of the nobility have been ransacked, and treasures from an artistic point of view, as well as from a utilitarian, have been brought to light and the dust of many years wiped away.

Many delightful examples of the coppersmith's art were until recently condemned by the travelling tinker as being no longer repairable, with the natural consequence that, their value as antiques being unknown, they were eventually sold for an "old song." Those pioneers of collecting who had time on their hands and foresaw an accruing value of even old metal went about from town to town examining the marine stores and visiting villages and farmhouses in search of anything old and curious. To-day there are few genuine antiques without some one to value them. Nearly every collection belongs to an appreciative owner, and when curios change hands it is generally at a premium instead of at "a bargain price."

Hitherto reference has been made chiefly to metal curios of British make, and to those objects with which Englishmen have become familiar. The collector, however, is cosmopolitan in his aims, and

cheerfully searches the world over for objects of interest. His curios come from the Far East, from Central Africa, and from all parts of Europe, and to some extent from the American continents. There have been many methods of producing metal-work, yet native workers in all countries have had but two processes upon which they have based their plans, and it is from the smiths who hammered copper and brass into shape, and in later days stamped it, and the founder who cast the metal in moulds, that all our curios come.

The Engraver's Art.

This outline of the hunting-ground of the collector would be incomplete without some mention of the products of the graver's tool which has produced so many works of art. The much prized mezzotints, stipples, and line engravings are pictures for the most part printed from copper plates. The metal rolled in sheets and planished becomes a work of art in itself when covered with those beautiful pictures so cleverly wrought upon the metal by the light touch of the graver.

Perhaps one of the most interesting uses to which copper has been put is that of executing beautiful miniatures—tiny pictures, portraits, and emblematic designs such as were used by traders on their stationery in years gone by. The copper-plate engraver has left his mark, too, in the beautifully quaint and very valued early issues of postage-stamps, some of which were printed from copper plates. Just as copper plays an important part in the produc-

tion of postage-stamps and pictures, so copper in conjunction with its alloys is the common metal of currency. Some of the most valuable metallic curios are the ancient coins which have been dug up from where they have been buried for centuries, or discovered in some hidden chamber. Such little objects of copper or bronze have an antiquarian value far beyond either their artistic beauty or their age warrants being associated with them. Collectors of metals know the value of some of the historic commemorative medallions in bronze, and heroes and warriors show their appreciation of one of the commoner metals in the value they set upon the simple Maltese cross inscribed "For Valour," for the Victoria Cross is more coveted than any naval or military award the Sovereign of these realms can bestow. Its owners regard it as a precious relic, and the reluctance of those left behind to part with it is seen in the large sum which has to be paid for one of these simple bronze crosses when it comes in the market.

III

PREHISTORIC BRONZES

CHAPTER III

PREHISTORIC BRONZES

The dawn of progress—London relics—The beauty of ancient art—The useful bronzes, the prototypes of later brasses—The forger at work.

As it has already been intimated, our older metal curios come to us from the Bronze Age. In the relics of that period, in which the British Museum is so rich, we are able to mark the great difference that must have existed between the people who lived the "simple life" in the Stone Age, and those who understood how to make and how to use implements of bronze. Metal must have revolutionized the habits of the people, fostered development, and marked progress as the Age advanced; for with metal appliances there were greater possibilities, and from the fact that while some used bronze others were content with flint, it would appear that then, perhaps, more than at any other time, the more advanced were sharply separated from those who, possessing lesser intelligence and possibly fewer opportunities, stayed behind.

The Dawn of Progress.

The more advanced Britons and the men of the later Bronze Age in other countries improved the patterns of their tools, the basis of which was found in flint implements, which in the later Neolithic period had become more varied. Even then they had hammer, saw, chisel, borer, spear or javelin, and arrow-point. They had also a variety of knives; some of curious sickle-like forms. There are weapons of war and weapons of defence, and some obviously used for the more peaceful arts and domestic purposes. As the collector secures specimens of the rarer types of bronze and metal objects coming to us from those far-off days, we read the story of the evolution of the race, and can picture in our minds the onward march.

The Romans did not find the ancient Britons quite savages, and we sigh with regret when we think of the numberless relics of priceless value—of bronze and of even more precious metals—which existed then, but which have perished long ago. The melting-pot has been a terribly fierce enemy to the collector of copper and brass, and it is really wonderful how many rare objects of the Bronze Age remain—prehistoric only in that we have no authentic records of the happenings of that period. We have, however, abundant evidence of the importance of that Age in the bronzes preserved to us for so long by Mother Earth, and now carefully tended by museum curators and private collectors. Among the fine examples we possess in our national collections are the ornamental bucklers of which some

FIG. 5 (1).—BRONZE CALDRON; AND FIG. 6 (2).—URN OF THE LATER BRONZE AGE.

(*In the British Museum.*)

have been found in Wales and other places. That represented in Fig. 2 (1) came from the Thames Valley, and Fig. 3 (2) from the peat bogs near Aberystwyth; both may be seen in the British Museum.

Some exceptional hoards have been found in Ireland, notably the bronzes which were discovered in 1825 in a part of Whigsborough, called Derreens, in King's Co. It is surmised that although the land is now boggy the soil was at one time under cultivation, and from indications it would appear as if the bronzefounder had worked on the spot. In Fig. 4 several representative implements found in that hoard are pictured; their descriptions are as follows: Fig. 4 (1 and 3), palstaves; (5, 6, and 7), daggers; (2) a pear-shaped bell; (4 and 8) curved trumpets, all specimens of the latter part of the Bronze Age or of the beginning of the Iron Age. Many fine bronze vessels, chiefly without feet, have been found in Ireland. The two examples shown in Figs. 5 and 6 represent the way in which they were made, especially Fig. 5 (1), in which the riveting of the plates will be observed. Fig. 6 (2) has been designated an urn. Both of these late bronzes are in the British Museum, along with other Irish finds. In the same collection there is a trumpet of horn with rings or bands of studs, the mouthpiece being at the side. It is a curious relic of an Irish musician, found some years ago at Drimoleague, Co. Cork.

London Relics.

London has been the site of an important camp, town, or city ever since man lived in the marshes

and upon the banks of Old Father Thames, and among the finds in the neighbourhood have been relics of every period of British civilization ; and as a natural consequence London possesses representative collections of the Bronze Age, as well as of later periods. Collectors have many opportunities of buying, as well as of inspecting prehistoric bronzes in museums and in less important private collections. Some of these antiquities are of good form and possess a beauty of their own. The vivid green, relieved with deeper shades, with which age has painted these ancient relics gives them a peculiar charm, and it would be vandalism indeed to attempt to "clean" the celts and knives which antiquaries handle with such veneration and care.

The Beauty of Ancient Art.

During the last few years more attention has been given to the beauty of the workmanship of the early objects of brass and copper relics of prehistoric peoples, especially of the people who inhabited this country in pre-Roman days. The London museums contain very representative examples. To many the Guildhall Museum is of special interest, in that every object there has been found within the confines of the City of London. There are implements of the chase and of war and peace. For instance, in the cases containing weapons which may have been used for defence against wild animals, as well as for aggressive campaigns, there are bronze celts, some socketed with loops, side by side with a very fine tool and two small lumps of copper, which were

discovered near the celt. These latter represent the unfinished material ready for the crucible and for the alloy which was to turn them into a bronze of special hardness. In the same case there are leaf-shaped swords and daggers of rapier form. There are also spear-heads of slender shapes with sockets extending near to the point of the weapon; and spear shaft-sockets of bronze, some of which were found in Fetter Lane.

Of the late Celtic period there are examples of personal objects, and it may be noted that duplicates of similar antiquities to those deposited in the Museum are on sale in a great number of shops in London, and now and then quite important parcels of these interesting metallic mementoes of peoples unknown come under the hammer. Such trinkets include bronze fibulæ, some enamelled, others of plain metal. A very beautiful specimen terminating with a roughly formed snake's head was found on the Thames bank near Hammersmith, on the site of reputed pile dwellings, some little time ago. In the same locality a bronze bowl and a mount were found soon afterwards. From the river near Battersea came a bronze shield, specially interesting in that it was decorated with enamelled ornaments. Horse-bits with enamelled rosettes have also been found in London. Perhaps one of the most interesting relics of that early age was a British helmet of copper, also decorated with enamels, found near Waterloo Bridge. In the Guildhall Museum there is a brooch made with a bow and pin in one piece, and quite a number of other styles of bronze fibulæ. There are bronze

hairpins, too, some of the heads being decorated. There are Celtic tweezers, armlets of bronze, and many rings.

To the inquisitive who like to inquire into the processes of making things and to their sources, the remains of ancient workshops represented by lumps of copper, strips of bronze, and objects partly formed, are of special interest. There are bows, showing another advance in civilization. There are spoons, too, of circular form, hammered into shape. It has been said that bowls and spoons are the earliest signs of domesticity and civilization. Our ancestors, who lived on the seashore, made use of large shells, which gave them the cue to the fashioning of a shallow dish, which eventually became a bowl. The wings of the valves of the oyster and the pecten may have given the suggestion of a handle to a primitive spoon. Ethnologists have said that the broken cocoanut in the South Seas was the bowl of the primitive tribes, and from it vessels in clay were moulded.

The Useful Bronzes, the Prototypes of Later Brasses.

The beautiful bronzes of the later part of the Bronze Age include objects showing the gradual development and progress of the race. Not only are the weapons those likely to be used in defence against attacks from wild animals rather than for aggressive purposes, and the domestic bronzes of more civilized forms, but there are in addition implements of husbandry. In Ireland some very pronounced sickles and reaping-hooks have been found. There are also musical instruments and

sounding horns, among them curved trumpets of bronze.

Many interesting although isolated finds have been made, such as a curious bronze or brass bucket with corrugated flutes, which was found at Weybridge, in Surrey, experts placing it among the relics of the early Iron Age. From Faversham, in Kent, many bronze mirrors have been secured, some of them being very ornamental, the backs being engraved all over. In the North of England several interesting finds have been made, too. Some of especial value were discovered in Heathery Burn Cave, Co. Durham; they consisted of domestic utensils which were probably used at the extreme end of the Bronze Age.

Among frequent finds is the patera or drinking-bowl, which must, of course, be distinguished from the patine, which was a flat dish with a raised rim, used for serving up meat or fish. Indeed, it would appear that some of the peoples who dwelt in those far-off ages of which we have no written history were more advanced in civilization and in the arts and crafts than we usually realize. Modern research has revealed much that was hitherto unknown, and scientists, explorers, and antiquaries now hold the ancients in much greater respect than formerly—they no longer regard them as "savages," although they may class them with the "barbarians" of more modern Europe.

Professor Petrie, the famous Egyptologist, when speaking on his wonderful researches some little time ago, said mankind had had a long past. That past

leads to the present, and without a knowledge of the present and to some extent of the intermediate ages we cannot fully understand the past. It is the curios of antiquity which help us, and lead up by slow degrees to the present; this is understood by the curio-hunter, and realized more and more as he goes further into the past of nations. The curios of the Bronze Age are not limited in locality. They are found in continents far removed from Western civilization, for in the remains of ancient Peruvians there are tools of bronze belonging to their far-off past. The Incas were not only adepts at working the precious metals with tools of bronze, but they were clever workers of other raw materials. They possessed beautiful textiles of cotton and wool and were noted agriculturists, having implements of tillage made of bronze.

The Forger at Work.

A warning note is often sounded by those who have paid dearly for their experience. It is needed, for there are many pitfalls for the unwary, especially in his researches among the relics of the Bronze Age and periods which have been much copied by the makers of modern antiques. It is worthy of note that in the middle of the nineteenth century several Birmingham firms in making bronzed inkstands, bracket lights, candelabra, and figures supporting lamps, copied the antique very closely, one noted firm announcing on their trade circulars that their designs were "according to Greek, Roman, and Gothic ornaments." Examples of such comparatively

modern work, when discovered tarnished and neglected, may sometimes have a close resemblance to real antiques, and even the curios of still greater antiquity — especially Egyptian curiosities — have been much forged. The forger—or, as he would prefer to be called, the maker of replicas—is still at work.

IV

GREEK AND ROMAN CURIOS

CHAPTER IV

GREEK AND ROMAN CURIOS

Grecian bronzes—Relics of Roman occupation—Interesting toilet requisites—Artificial lighting—Statues and monuments—Romano-British art—A well staged exhibit.

It is from the curios in metal and the antiquities in stone which have been discovered, chiefly in comparatively recent years, that we are able to read with understanding the allusions made by classic writers to domestic life as it was in ancient Greece and Rome. The records of the art of Greece become more real when we have gazed upon the beautiful and graceful statues and the furniture of the palace and domain for which the artists and metal-workers of those days were so justly celebrated.

Even the public school boy takes a greater interest in his studies when he recognizes in the furnishings of his home antiquities from Greece or those lands in which that once powerful nation founded colonies.

Grecian Bronzes.

In the modern replicas of antiques, and in the fashioning of the common household bronzes of the

present day, the craftsman, perhaps unconsciously, gains inspiration from the older race of artists in metals. Indeed, the nearer the workman adheres to the form of the statues and domestic decorative metal-work of the ancients, the more likely he is to succeed in imparting refinement to the modern home. Ancient Greece was the nursery of art and the training ground of the athlete and of the model who served as the type of the goddesses whose perfect forms and attributes were regarded as worthy of the divinities her sons and daughters worshipped. Most of the metal objects coming to us from classic days are of bronze, toned and patinated. Images of the gods and goddesses worshipped by the ancient Greeks were to be found in every house. Wealthy patrons employed the artist in metal to produce idols and appointments for the numerous temples they built. It was the worship of many pagan deities that found work for many craftsmen. The very multiplicity of the gods served the purposes of trade, hence the supporters of pagan practices and worship found in the metal-workers and artists who wrought such things powerful allies. We read in Biblical accounts of that day that the introduction of Christianity caused no small stir amongst them, and incited Demetrius, the silversmith, and others to rise up against the "new religion," which gave no immediate promises of employment of metal-workers to compensate them for the loss of trade in idols. It was thus that so much that is beautiful when regarded as merely artistic bronze figures was made. Among the favourite deities whose emblematic bronzes have

been preserved to us are Diana, Venus, Mercury, and Hercules. They rank with the gods of brass of the heathen, and according to their classic beauty are admired with the idols of metal from India and Africa (see Chapter XIV).

In all these treasures from the old world, little known or understood now, there is a blend of the decorative and artistic and the more utilitarian objects of the household. The slaves of the old families often lived luxurious lives, although the goodwill of their patrons and owners might be fickle. They had their duties, and the metal objects they handled and often skilfully manipulated are still preserved in our museums. These were often fashioned with the same grace as the statues which adorned porticoes and halls.

The ornamental objects of Greek workmanship include useful braziers or bronze tripods which gave heat and also served as purifiers; for into their round brass dishes were thrown perfumes to correct the smell of the coals and charcoal, which were then held to be injurious. Such braziers were also used by the Romans, and even in the Middle Ages were not uncommon, pepper and cloves being then burned for fragrance.

Relics of Roman Occupation.

Although many beautiful objects have been imported into this country by collectors and dealers bought in Rome itself, and in Italian and other continental cities where Roman remains have been found, it is the relics of the Roman occupation in

Britain which take first place in our estimation among the valued curios of that great nation. These have been found in many places, often quite unexpectedly.

Modern London, like modern Rome, stands in part on ruins of an older city. Hence it is that when foundations are being dug and excavations to some 15 to 20 feet are made, relics of Roman London and of Saxon and early Norman buildings which were built in subsequent ages upon the older ruins come to light. It is amidst these ruins and the debris of old architecture that metal curiosities are often found. Copper and brass have not perished to the same extent as iron and more corrosive metals. In London, Bath, Chester, and cities which were famous many centuries ago, the earliest metal curiosities are unearthed. But many of the most valued have been found where least expected, for it must be remembered that even the sites of many old cities have been lost, and green fields now cover the old foundations.

It is a little disappointing at first, when a collection of Roman antiquities is under examination, to find that they bear a striking resemblance to modern appliances—especially is that so in the cooking utensils. Most of these early vessels are of bronze; some, however, are of pure copper, mostly covered over with green patina. The useful seems to have predominated over the ornamental; possibly it is that the more substantial cooking-pots and pans have remained, although lighter and more ornamental objects have perished.

The pots and saucepans are indeed remarkably like those which are now used for similar purposes. This has been remarked by many who have had to do with the uncovering of long buried ruins. A writer describing a Roman kitchen attached to the villa of a patrician family of note in the Republican era before Augustus assumed the purple, which had been uncovered in Rome, said, "The culinary utensils found there are much like our own, made of brass, some of them dipped or plated over with silver." They consisted of kettles with feet, with a dome-shaped opening under them, a hollow cylinder which entered into the kettle base so that the fire could penetrate it.

Many of these utensils, whilst possessing great strength and lasting qualities, were not altogether plain, for they were covered with foliated ornament like the saucepan illustrated in Fig. 7. The saucepans without handles were something like a caldron on feet; many, however, were fitted with bail handles, by which they could be hung over the fire by the aid of a tripod. The metal of which these early vessels were made varied, for although some were of bronze, some were made of a yellowish brass, like one found in London near Ludgate. The Guildhall Museum is the best place to find a thoroughly representative collection of Roman metal-work. In the cases there are curious saucer-like bowls with and without handles, many spoons of bronze, and a variety of ladles, some of which have long and narrow bowls; and there are some culinary strainers, not unlike the modern colander.

There are many ewers and some bowls or basins of bronze. In Fig. 8 is shown a ewer of hammered copper, the handle having at the time it was made, or at some later period, been strengthened with brass wire, which is in part flattened and stamped with medallions giving the vessel an exceedingly ornamental appearance. This curious piece is to be seen in the Victoria and Albert Museum.

Among the more important kitchen accessories which have been discovered on the sites of Roman towns are bronze scales not unlike miniatures of the steelyards once common in England, and still used by butchers. Then there are brass gridirons, dripping-pans, and cups of bronze. There are also copper pails for cooling wine, and in a few instances bronze stands for the wine amphoræ. It is almost impossible to point out the sites which are likely to yield the explorer the best results, neither is it possible to locate the town where metal-work has been found to the greatest extent, for all old camping-grounds and towns once occupied by Roman troops or residential cities during Roman occupation contain what has been thrown away as useless or has been buried accidentally.

The collector is delighted with the many little objects which can be bought, trifling matters when seen separately, but very interesting when collectively displayed.

Interesting Toilet Requisites.

During excavations on the site of the National Safe Deposit Company's premises in Walbrook quite

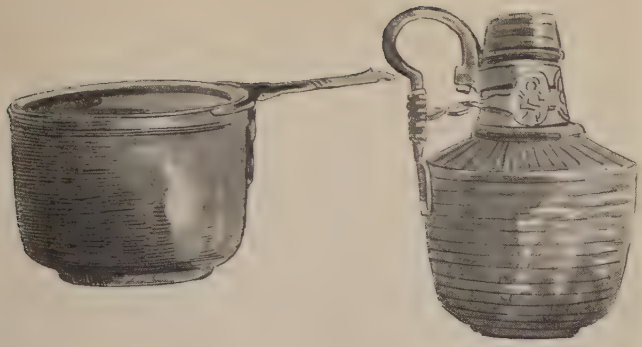


FIG. 7.—BRONZE SAUCEPAN WITH FOLIATED HANDLE.

FIG. 8.—EWER OF HAMMERED COPPER.

FIG. 9.—LAMP OF CAST BRONZE.

FIG. 10.—LAMP OF BRASS INLAID WITH COPPER.

a number of beautifully formed small objects were found. Indeed, such curios (by no means uncommonly met with on sale in curio shops) are very numerous, and include toilet implements, armlets of twisted copper wire, finger rings of bronze, dress fasteners, pins, fibulæ, tweezers, key rings, bodkins, and needles.

The looking-glass is of course a modern invention, but Greek and Roman maidens learned the art of finishing their toilet in the reflective "glass" of the shining pool, and later by the aid of mirrors of highly polished metal made by the craftsmen of Rome; some of which have been preserved. The surface to which this reflective polish was given was of copper alloyed with antimony and lead. Such mirrors were sometimes hung to the girdle, a custom not unknown to Shakespeare, who frequently makes mention of it.

Artificial Lighting.

Artificial light has been a necessity to man ever since primeval days. The whole story of the discovery of fire-making and the light it gave is an enchanting romance. The contrivances for procuring and lighting a fire and for the betterment of artificial light have been many, and throughout the ages they have received perhaps greater attention by the inventor than any other requirement of the race. Of all the curios of the period under review none have been more prolific than those associated with artificial light. The lamps of ancient Rome, of beautiful bronze and brass, contrasted with the clay or terra-cotta

lamps of cruder forms which have been found in such quantities. Their chased patterns were often modelled on the earlier Greek vases, so many of which are to be seen in the British Museum among the rarities of the metal collector. No collection of copper and brass would be complete without examples of the arts and crafts of Rome, so beautifully exemplified in the charming lamps to be carried in the hand, to stand on pedestals, and for suspension from the ceiling. There was something in their ornamentation which carried them beyond the works of the utilitarian maker. A celebrated historian, referring to the lights of ancient Rome, speaks of their matchless grace and simplicity, and says, "They afford traces of decoration showing an elevation in the ornamentation of common articles of every-day use." The Roman lamp of bronze was carried everywhere the conquering armies went, and in Roman settlements in France, Italy, and in Northern Africa, as well as in Britain, the native artificers in copper and bronze saw in them designs to be imitated; and after the Empire of Rome had fallen, the models which emanated from the Imperial city served as the designs for lamps in many countries centuries afterwards. The illustrations shown in Figs. 9 and 10 represent bronze lamps—the former, Fig. 9, is cast, and is an early example; Fig. 10, however, is of a later period, and it is made of brass inlaid with copper. The examples found in this and other countries may be divided into two groups, those distinctly Roman and of early date and those of the days when the Christian religion

was recognized by the Emperors and the State. These latter are known by the decorations upon them.

Statues and Monuments.

Reference has already been made to the beautiful statuettes of Greece. There are others, to many grand in their conceptions, the work of Roman modellers, many representing Apollo, Hercules, Mars, and Mercury having been found. In the British Museum there are some wonderfully striking heads of several of the Emperors, and other men whose portraits have been handed on to us in monuments of stone, and upon coins and medallions, the die-sinkers of which so faithfully portrayed the men they pictured. The names of many of the most famous artists are known, and collectors rejoice over fresh examples of their handiwork. It is, however, the general characteristics of the Roman worker in metal as a whole that connoisseurs recognize and appreciate, and the true connoisseur is always searching for some greater artist's work than he has hitherto been familiar with. He is on the look-out for the very best among art treasures.

An amusing story has been told of a modern manufacturer who was very fond of inserting in his advertisements paragraphs calling attention to his modern works of art, which he said were "acknowledged by connoisseurs to be the best." "Father," said his little boy one day, "what do you mean by a connoisseur?" "A connoisseur, my boy," answered the manufacturer of copper goods, "is an eminent

authority—an authority, in short, who admits that *our* goods are the best."

We are apt to look upon the beautiful brass grilles and copper lock-plates of mediæval days as the earliest examples of these metals in lock-making, the earliest locks found on old doors and muniment chests being chiefly of iron. But when we go back to still earlier times and examine the relics of Roman London, we find key-rings and keys of bronze, some very ornamental, too. One beautiful little key found near All Hallows Church has a bow terminating in a small spur. Another bronze key found near St. Swithin's, in Cannon Street, has a ridged annular bow, with a short square stem. Other keys are equally decorative; the locks, too, are in many instances ornamental, although in design and workmanship they fall short of the pinnacle of fame reached by the lockmakers in later Gothic times.

Romano-British Art.

Many readers in searching for curios of the Romano-British period in this country will recall the fact that the ancient Britons possessed bronze; and doubtless we should be doing an injustice to the more enlightened dwellers in Britain before Roman occupation, and contemporary with it, if we did not admit that possibly some of the relics of that period now dubbed Roman belonged to those more entitled to our regard, for Albion was their native land.

On the Thames Embankment, facing the Houses of Parliament, there is that famous bronze group perpetuating the memory of the British Queen

Boadicea in her war chariot. The Romans made their famous paved roads as they pushed their outposts and line of camps farther north and west. The wheels of many British war chariots were made of, or hooped with, brass, and possibly the brass or bronze wheels, such as are represented in that group on the Embankment once covered by the flowing river, may have rattled over the roads made by the conquerors; such chariots, with their appointments of bronze and ornamental horse trappings, showed much skill in their fashioning. A poet gives voice to their use in the following lines:

> "On the bright axle turns the bidden wheel
> Of sounding brass, the polish'd axle steel."

A Well Staged Exhibit.

It is scarcely necessary to remind readers that there is a peculiar attraction in a well staged exhibit —public or private. A case of Roman and still earlier bronzes may be made attractive by an arrangement giving a gradation of subject and inclusive of the plainer types with the more delicately formed ornamental trinkets. A very fine example of how to arrange such a collection is seen in one of the rooms in Stafford House, the new home of the London Museum. The entire collection, representative of various periods of the Roman occupation of Britain, so carefully mounted, is worthy of close inspection. It includes many rare pieces, one being an early Roman lamp, which was found in Greenwich and is said to be unique among London curios. Indeed, it is probable that none so fine, nor of

exactly the same design, has been found in England. This we are able to reproduce (see Fig. 50). The newly arranged London Museum is likely to be a rendezvous of Londoners and their friends from the country, for not only are there early antiquities in copper and brass, but many fascinating curios arranged in historical sequence, showing the development in metal-work as it was fashioned by London smiths and founders, and the progress made by other craftsmen as kings and queens came and went and the London as we know it to-day was being evolved.

V

MEDIÆVAL ANTIQUITIES

CHAPTER V

MEDIÆVAL ANTIQUITIES

Domestic brasswork—Metal signs and badges—Ornamental trinkets—Arms and armour.

As the collector of copper and brass assembles his treasures and arranges them according to the different periods in which they were made, it is always the household utensils which predominate. As time goes on their number increases and the ornamental blends with the useful; but the increase in the variety is only in proportion to the gradual extension of the number of other household curios of contemporary dates.

The period under review, for convenience termed mediæval, extends in actual fact from the rougher days of the Norman sovereigns to those when bluff King Hal held court and Elizabeth made so many "grand tours" among the country seats of her people. At the beginning of this period the furniture of even the nobility and wealthy ecclesiastics was very scanty, and when the proud barons moved from one castle to another they carried with them all their household furnishings, even their more treasured culinary

utensils of copper and brass. They stowed them away along with their jewels and their other belongings in oak coffers, which in the earliest days were made so that they could be carried on poles by retainers.

> "In oaken coffers I have stuffed my crowns,
> In cypress chests my arras counterpoints,
> Pewter and brass, and all things that belong
> To house or housekeeping."
>
> *The Taming of the Shrew.*

Domestic Brasswork.

In mediæval days the metal-work was "home made," that is to say, it was the work of retainers and those who were employed upon an estate. The old smiths not only worked in iron but wrought copper and brass, and the founders were building up a reputation; and their chief men were laying down rules for the guidance of the craftsmen. The influence exerted upon the metal-work of this country by the trade guilds of London is referred to in Chapter VI. In their prosperity no doubt the kitchens of the once powerful guilds were filled with cooking vessels indicative of the feasts held by the freemen of the different crafts. Some may say there are still evidences of such feasts; but most of the cooking vessels of early days perished in the Great Fire, although doubtless there are relics of a later period to be found in the kitchens and cellars of the Guildhall and some of the lesser halls.

Some of the companies, if they have lost their treasures, still possess records which are helpful to the antiquary, and we naturally turn to the parchments

and books of the Worshipful Company of Founders, and there, appropriately enough, it is written that at one time they had jurisdiction over the manufacture of candlesticks, buckles, spurs, stirrups, straps, lavers, pots, ewers, and basins of brass and latten. The mark of the mystery was early made a ewer, a ewer and two candlesticks being given to the Founders in 1590, when they obtained a grant of arms; the motto they adopted was: "God is the only Founder."

The foundries of the craftsmen, workers, and casters of brass, latten, and kindred alloys in London were chiefly in and near Lothbury, among their most noted products being candlesticks and spice mortars—two staples which have become nearly obsolete, although none would say that the founding of metal is as yet an obsolete craft. Thus it is change and development are seen everywhere in production. The chief privileges of the Founders have gone, although they still take some little part in the stamping of weights and measures; but that, too, has become a Government duty. The Founders have some interesting pieces of plate, but not much copper. Their best example of their own craft is the ancient poor-box of copper which was presented to the Company by Mr. Stephen Pilchard in 1653, the year in which he was Upper Warden.

The feeding of man has always been the first duty of those who took charge of domestic arrangements, and we can readily understand that the caldron or cooking-pot was the earliest vessel. Its use may be regarded as universal, for it is found to have existed

everywhere (see Chapter VIII). In mediæval England the feasting of the poor and the feeding of scores of retainers in the baronial halls and in the great ecclesiastical buildings, where hospitality and charity were rife, necessitated immense boiling-pots. Some of those referred to under "Domestic Utensils" (Chapter VIII) seem to some too large for practical purposes. It may, however, be pointed out that there are many large cooking-pots in use even at the present time; and copper caldrons of large size are used in hospitals and infirmaries. Quite recently there appeared in the public Press photographs of a well-known Countess making an Irish stew at Liberty Hall, Dublin, stirring round the contents with a wooden stirrer and lading out bowlfuls of soup with a metal scoop; it was food for the sufferers through the strike at that time going on in Dublin. It is thus that the poor of all ages have been fed. As kitchen operations were confined to lesser areas and smaller vessels were needed by individual families when patriarchal systems were broken up, they were but replicas in miniature of the larger caldrons and vessels which had become too large.

It is wisely said, "Fingers were made before spoons," a fact true enough, but as time went on and the habits and customs of men and women became less rough, although as yet hardly refined, a need sprang up for utensils for personal use. Hitherto cooking forks and spoons were used in the kitchen, but the hunting-knife mostly served at table. It is true spoons were in use in very early times and even

FIG. 11.—BRASS AQUAMANILE (SEVENTEENTH CENTURY).

(*In the British Museum.*)

by the common people. At first of iron or wood, afterwards made of brass and latten, they are found wherever there are remains of mediæval dwellings. A Scotchman is said to have declared that "the discovery of hot broth was an epoch in the evolution of man, and that as the ladle is to the pot so is the spoon to the bowl."

Such brass ewers and basins, known as aquamaniles, mostly of bronze (one of Continental make is illustrated in Fig. 11) were used for the purpose of washing the hands, over which the water was poured. They were used in connection with bowls. Another type of laving ewer is that of the gemellions, made in pairs, one portion being held under a person's hands while water was poured out of the spouted bowl. Gemellions seem to have been the somewhat clumsy prototypes of the more convenient jug and bowl of later days. The use of ewers and basin was very necessary both before and after meals when knives and spoons were little used and it was no uncommon thing for two persons to eat out of one dish.

In mediæval days even domestic articles were frequently decorated, for English and European metal-workers had caught the figure work of the Oriental school. Their ornament took the form of hunting and battle scenes. Sometimes patrons were eulogized, and flattering inscriptions covered the objects wrought for them by their servile dependents. In Fig. 18 there is shown a bucket or bath vessel now in the Victoria and Albert Museum, rather an unusual piece of early metal-work and an in-

teresting mediæval curio. Not long ago a similar bucket was dug up in the neighbourhood of Weybridge.

We are apt to regard with disdain what we term the grandmotherly legislation which tampers with the liberty of the subject. The present day, however, is not alone remarkable for regulations by which the home life of the nation is controlled. The Norman law which ordered "lights out" when curfew rang cut short the "overtime" of the worker of that day. So stringent was the enforcement of that law that not a glimmer of light must be seen after the appointed time. To darken or extinguish the dying fire on the hearth the *couvre de feu* became a feature. Such covers of well authenticated antiquity are rare; the one illustrated in Fig. 12 is a well-preserved example now in the Bolton Museum.

Metal Signs and Badges.

In the early days when serfdom had not long ceased and the retainers of the nobles had not won their full freedom or independence, signs and symbols of their allegiance to some chief or overlord were plentiful. The Crusaders brought back with them signs, amulets, and various objects which they wore with more or less superstitious belief. The pilgrims to the most noted shrines in this country followed suit, and all these various purposes and mediæval customs have furnished the curio-hunter with many delightful reminders of the "good old days" when superstition and almost idolatry were rife. Old Father Thames has preserved many of

them for centuries, and twentieth-century collectors are richer thereby.

In the Guildhall Museum in London there is a very complete and representative collection of pilgrims' signs. Although many of them are made of a soft metal, there are others of good copper and brass. At one time they must have been very plentiful, for very prolific have the finds been in the neighbourhood of London Bridge and in and around Southwark. These signs or badges were secured and worn by the pilgrims who set out to the chief shrines, notably that of St. Thomas à Becket at Canterbury. Chaucer in his *Canterbury Tales* has told that there were many traders in pilgrim signs in Canterbury city, so that all were enabled to possess themselves of such symbols, many of which they threw upon the shrine, and others retained them as talismans against danger on the return journey. The pilgrims wore a variety of emblems—the more devout, it is said, preferred the cross; others carried with them on their journey little metal figures of St. George, St. Katherine, St. Christopher, or other saint with his or her symbol. St. Agnes was represented by a lamb, St. John by an eagle, and St. Dorothy by a basket of fruit. Perhaps the most favoured sign purchased in Canterbury was an equestrian figure of St. Thomas à Becket. Some of the emblems were worn as protectors against evil, and such signs were almost invariably on horse trappings; indeed, such amulets have been perpetuated almost up to the present day. There are several circular discs in the museum referred to, said

to date from the twelfth century, upon these are embossed two horned animals ; another badge of a little later date, in copper, has upon it a shield of arms surrounded by three mythical dragons ; it was found in Ludgate Hill. Yet another on which is a shield charged with seven stars, said to be of fourteenth-century workmanship, was found some time ago on the site of the old General Post Office in St. Martin's-le-Grand.

The retainers of noblemen wore private badges by which they were known ; these were mostly of brass or bronze, and sometimes they were gilded. They were frequently worn when on a journey as a passport. Such badges in the form of circles and lozenges were usually furnished with a loop for suspension, and became well known. They served a similar purpose to the distinctive livery of later days.

Ornamental Trinkets.

The household ornaments, trinkets, and little articles of personal adornment which have been preserved tell not only of female vanity but of masculine love of ornament. It would appear that the use of bronze lingered on for centuries after it had nominally been displaced by brass ; especially was that the case in decorative objects and metal ornament. The metals known as bronze, copper, and brass are, however, much intermixed in their use.

The objects which can be collected include brooches, rings, pins, needles, bodkins, and thimbles

of brass. Buckles are very numerous, and varied in form; some are heart-shaped, others have ends cut out to form a trefoil and are decorated with a pierced fleur-de-lis. The story of the pin, the smallest and yet the most used metal object preserved, is very interesting. At one time it was made by hand from brass wire, the head being twisted round and round until it had the appearance of a solid knob. The Pinners were in years gone by an important guild, and in 1376 returned two men to the Common Council of London. In the reign of Henry VII an Act of Parliament was passed compelling the Pinners to solder fast to the shank the head of the pin, and directing that the pin itself should be "smooth, rounded, filed, and sharpened." Very laborious indeed must have been the making of pins in those days. There were pins, however, of an earlier date, for it is recorded that on one occasion when the men of Athens had gone out to battle only one returned. He was met by an infuriated mob of women, who were so enraged at the loss of their husbands that Herodotus tells us they pulled the pins out from their garments and stabbed him to death. There were bronze pins in Rome, too, and we are told that even the safety-pin of to-day is by no means new, for among the collectable objects in brass are prehistoric safety-pins.

Half a century ago, when little girls went to school they carried with them the inevitable pin poppet, some of which receptacles for pins and other similar sundries were of wood, but many were brass; some met with among old metal curios are quite hand-

somely decorated. Another indispensable object is the button, so many of which are of metal, many decorative, some inscribed, and others ornamented with portraits. There are little brass sleeve-links, worn in Tudor days, to be met with, and some curious brass studs which were worn by men in the shirt fronts of the early Georgian period. There are clasps of purses and books and casket mounts of brass, some of which date back to the fifteenth century. The older mounts of purses, so-called, would be more correctly described as the mounts of gipcieres ; the gipciere was a kind of pouch formerly worn at the girdle ; the name is also spelled *gipser* :

> "A *gipser* all of silk
> Hung at his girdle white as morné silk."
>
> CHAUCER.

Sometimes the mounts were inscribed with mottoes ; one found in Brooks' Wharf, London, believed to be of fourteenth-century workmanship, is inscribed "CREATOREM CELI ET TERRE ET IN IESVM." Other objects in brass are girdle ends, some of which are shaped like acorns and others are of ivy-leaf design. Among ornamental bronzes which can be worn, and in larger sizes hung upon the wall, there are plaques, many of the earliest being copied from antique gems. Plaquettes in bronze were common in the sixteenth century.

Arms and Armour.

A volume might well be taken up with describing mediæval arms and armour. It is true iron and

steel are the chief metals in the making of weapons, but brass and bronze are closely allied with some of the armaments of war. Many of the small mediæval cannon were of brass, and not a few of the guns, or "hand cannon," were of that metal.

In the days of Elizabeth the musketeer carried, in addition to an unwieldy weapon, his flask of powder, touch-box, and burning match. The match-box was a tube of copper pierced with small holes, and in it the lighted match could be conveyed safely. The powder-horn was at first of real horn, but in time it became a copper flask. Many of the old flasks were exceedingly ornate, and were often ornamented with hunting scenes worked up in repoussé on the copper sides. The spur-makers were important craftsmen in early days, and under the name of the Guild of Loriners ranked with the City companies. It is true that the spur rowels of six, eight, or even twelve points were generally of iron, but the collector of metal finds many interesting specimens made entirely of brass. One pair of spurs in the reign of Henry VIII consist of fourteen brass points, the neck of the rowel being shaped like a peacock and embossed with brass rosettes. Our finest collection of armour and of ceremonial metal-work — that splendid collection which dates from quite early times, finding its greatest strength and massive grandeur in late mediæval days and its artistic ornament in the richly damascened armour of lesser weight of the Stuarts—is rightly housed in that greatest of English strongholds, the Tower of London. It is there that the antiquary and the archæologist

love to wander, and in the vast recesses of those dungeons and prison-like towers read history. There is an abundance of metal everywhere. Guns and cannon and mortars of historic fame lie about in the open. The Bloody Tower, nearly opposite the Traitors' Gate, the Middle Tower, the Byward Tower, and many others of equal interest may be seen. To some the Regalia with its crowns, swords, and sceptres of state, ampulla, spoon, salt-cellars, maces, and orders of merit, are the greatest attraction. The curio collector, however, finds his way to the museum and admires and perhaps envies the quaint and curious guns, powder-horns, and trophies of war. He is in the midst of the England of the Middle Ages, with its jousts and tournaments, shut out by the thick walls of the White Tower from the hurry and bustle of the traffic and commerce of the twentieth century.

The magnificent armour in Hertford House—the Wallace collection—is a delight to those who love to see in arms and armour the perfection of beauty of ornament and decoration. There are splendid suits which look as bright as the day when they were new. The half-suit of armour of Italian workmanship made for Alfonso II, Duke of Ferrara, inlaid and damascened with gold and silver, is said to be the finest in Europe. The staging of this splendid collection was carried out by Mr. Guy Laking, the Keeper of the King's Armour and Custodian of the London Museum.

A fitting conclusion to this chapter is, surely, a tribute to the armourers and founders and smiths of

ıe Middle Ages, who worked so conscientiously and nade their work lasting. It has retained its beauty nd much of its ancient finish, notwithstanding atmo- pheric influences; indeed, some of it gained added eauty by oxidation.

ATER
ETAL-
ORK

FIG. 12.—BRASS *COUVRE DE FEU*, A RARE EARLY PIECE.

(*In the Chadwick Museum, Bolton.*)

CHAPTER VI

LATER METAL-WORK

influence of the Guilds—Architectural metal-work—The door knocker—Interior metal-work.

all branches of art there seems to be a break tween the earlier mediæval and the later art which s the outcome to some extent of the great Renais- nce or revival which swept over the Continent of rope and brought with it such a change in every- ng appertaining to the beautiful. Whilst mediæval tal-workers produced grand examples full of sign and ornament, influenced by the touch with stern nations which the Crusaders gave them, the er smiths and founders gradually evolved styles of ir own, more English to our ideas. The Renais- nce with its wealth of ornament did not so much ply to copper and brass as it did to the metal-work the smith who forged that which was beautiful and ate in iron on his anvil. Yet some of those florid signs were reproduced by the brassfounder.

After the Restoration the art treasures which had n destroyed during the Commonwealth were laced, as evidenced by the Regalia in the Tower,

where there is so much silver-gilt and gold plate which represents the more decorative art of that period. In that famous collection of national Regalia, symbols of office, and vessels used on rare occasions, there is the alms-dish used for the distribution of the King's doles on Maundy Thursday. It bears the Royal cipher of William and Mary, and contrasts with the other plate in that it is remarkably plain, typical in its decoration with the earlier metal-work of the days of Queen Anne and those years which immediately followed her reign. When we walk through some of the once select, although now not much used, thoroughfares in London and admire the stately old houses which may be seen still in some of the Metropolitan squares, especially in the open thoroughfare known as Queen Anne's Gate, we are inclined to wonder whether after all "Queen Anne is dead." That hackneyed expression used in a humorous sense at times is certainly not true in so far as the remarkable developments in building operations and the characteristic decorations of Queen Anne's day live still not only in the old houses which are still undisturbed, but in the designs and characteristic patterns which were then adopted by metal-workers and others, their beauty and grace being recognized to such an extent that they are to-day among the much copied antiques.

The Influence of the Guilds.

It may be convenient here to refer to the influence of the old City guilds, which for so long a time acted beneficially, keeping the craftsmen of their

-ay up to the mark, maintaining the purity of metal nd other materials used, and encouraging and stering the attainment of the highest skill in rtistic workmanship.

The City Companies have long ceased to exercise ctive control over individual craftsmen ; some would ay that trade unions have taken their place, and thers would point to the altered conditions of manu- acture and of trade which exist now. None can eny, however, that the influence of those early ioneers is still felt, and the basis which they laid own as the art of the later period of English crafts- nanship, amongst which we find the greater number f our collectable curios, remains to-day the founda- ion on which modern developments are built up. The Braziers' Company was once an important guild in connection with metal. Many years ago the Braziers oined the Armourers, claiming, however, a monopoly f all copper and brasswork. By an Authority eceived from James II the members of the Braziers' ompany were granted the right to search and prove ll copper and brasswork wrought with a hammer within the City of London. It is said that their harter is still in force, although their rights and rivileges are now sinecures. Few members of the ld City companies have now any direct connection with the crafts with which their names are associated. They exist, however, and use some of the funds at heir disposal for the encouragement and develop- ment of the modern crafts which have evolved from he older foundations with which they were asso- iated. Now and then important exhibitions are

held at which examples of the old and the new are shown, not always redounding to the credit of the antique. Some few years ago a very interesting competitive exhibition was held at Ironmongers' Hall at the instigation of the Worshipful Company of Founders, by whom prizes were given for artistic metal-work made by living craftsmen who had studied antique metal-work and had caught somewhat of the spirit of the old artists in copper and brass. The competition was keen and many of the exhibits very beautiful. The winner of the first prize had modelled a goat from life. The second prize went to the modeller of a calf which was cast in bronze; the third prize being awarded for a splendidly modelled lioness. In another division prizes were given for bells; the first prize was awarded to the founder of a church bell cast in loam, and the second prize to the designer and founder of a bell on which were exceedingly well-modelled representations of the Resurrection. In all these examples the influence of the antique was very conspicuous.

The impetus which has been given to modern copper smithing by the Arts and Crafts Society through its exhibitions has given quite a different conception of the art from that which was formerly held. Instead of being a common craft, working in copper and brass has become one of the fine arts, a hobby much practised, and the results appreciated. The late William Morris, at one time President of the Society, and Walter Crane, artists of no mean order, exerted a great influence on the work of exhibitors. They have raised the tone of the work

FIG. 13.—COPPER VANE ON BILLINGSGATE FISH MARKET.

FIG. 14.—THE CITY DRAGON AS A WEATHER-VANE.

FIG. 15.—COPPER COCK VANE, ONE OF FOUR ON SMITHFIELD MARKET.

done by amateurs and have been the means of guiding modern workers in these metals in their efforts to reproduce the antique. Curios and antiques have served a double purpose associated with crafts such as those under review, as they give the present-day artist the foundations upon which to work. They give them evidence of styles and designs which have prevailed in the past and models upon which to build the art of the future. Briefly, among the best works of to-day fashioned on the arts and crafts of the coppersmiths of old are the beautiful metal dogs and fire-hearth appointments. There are the copper grilles, exquisite in design and useful for many purposes ; copper lanterns and brass lamps of great variety ; copper candlesticks, as well as the beaten metal candelabra and electroliers, also over-mantel panels and beaten copper roundels, all worthy objects for the craftsmen of the present day to follow. Perhaps the most elaborate productions based on the antique are the ecclesiastical brasses of which there is ample choice in the old brasswork in so many cathedrals and parish churches.

Architectural Metal-Work.

Many years ago architects not only designed the main fabric and supervised the building of houses, such as those incidentally referred to being erected in the days of Queen Anne, but they were deeply interested in the metal-work which acted as exterior ornamentation, and to a large extent contributed to the beauty of their architectural designs. After the

Great Fire of London swept away so much of the ancient residential portion of the old city, and took with it the Gothic and early mediæval churches, there was a great revival in building operations. Sir Christopher Wren and his fellow-workers put up more than sixty new churches within the City, and although to some extent the contour of the old streets was observed, the newer buildings must have presented an astonishing transformation scene, for from the few old relics left of London before the Fire we can form some slight idea of what the City must have looked like then.

The collector of copper and brass takes an interest in metal-work other than that which he can collect, and admires works of art with which the architects of olden times enriched their chief buildings. It is true a considerable portion of the exterior metal-work attached to the freehold, and of the gates and palasades surrounding the more important erections, are of iron. There are enough examples of copper-work, however, to show us the skill of the old crafts-men who worked on years after the Charter granted by James II to the Braziers' Company had become a dead letter. One of the most conspicuous and at the same time decorative examples of copper-work on the loftier buildings is found in the weather-vanes, which were sometimes gilt, at others painted. In the earlier days the emblems selected had some bearing on the ownership of the building or the purposes for which it was to be used. There were well-known rules, too, governing the type of weather-vane. These are recognizable in the older examples.

They have been neglected, however, in later years, and the nondescript designs chosen by builders and modelled according to the whim of the designer at the present day show little regard for the principles laid down by those early builders and metal-workers. The etiquette of the weather-vane was simple enough to observe. On towers, castles, and secular buildings a banner was the correct device, whereas on ecclesiastical edifices it was the barn-door fowl. It is said by an old authority that the cock was the emblem of clerical vigilance, not unassociated with the Biblical story of St. Peter ; others more sceptical as to the origin tell us that the large tail of the barn-door fowl was well suited to turn truly to the wind. From these simple principles evolved established rules which ordered that the coat-of-arms or crest of the owner of a building should be incorporated in the design of the weather-vane, and on ecclesiastical buildings the symbol of the patron saint was to take the place of the weather-cock. As typical examples to be seen in London streets the weather-vanes on the four turrets of the White Tower of the Tower fly the Royal Arms in the form of miniature Royal Standards. In Tudor days the emblem was usually represented sitting on a slender pedestal, carrying an upright rod on which the flag or decorated plate of metal which acted as the weather-vane was attached. In the accompanying illustrations three types of symbolical weather-vanes are shown. Fig. 13 represents one of the copper vanes on Billingsgate Fish Market, symbolical of the occupation of those who frequent that famous mart. In Fig. 14 is seen the

fabled dragon of the City of London, and in Fig. 15 the copper cock vane, one of the four fixed over Smithfield Market.

There are many ecclesiastical emblems visible during a morning stroll through the streets of London. Among those readily seen are the key vane on St. Peter's, Cornhill, and the emblematic gridiron on St. Lawrence's Church. On St. Michael's Church, Queenhithe, there is a copper ship, the hull of which holds just one bushel of grain. This vane is interesting in that the emblem has reference to Queenhithe, once a famous wharf, rather than to the patron saint. The Hithe is interesting in its old associations, in that the tolls of that wharf were given to Queen Eleanor by Henry II as pin money, subsequent queens of England collecting the revenue for their personal use. The grasshopper on the Royal Exchange is the same vane that surmounted the more ancient building which preceded the one now standing. The grasshopper was the crest of Sir Thomas Gresham, by whom the first Exchange was built in the reign of Queen Elizabeth. This vane, also of copper, is fully 11 ft. in length, and in miniature was reproduced as the sign of the banking house in Lombard Street kept by Sir Thomas Gresham.

The Door Knocker.

The common door knocker, essentially a piece of metal associated to-day with utilitarian purposes, is not without romantic associations. It has been a much collected object; easily detached, too, for it is

said that many of the old knockers, or rappers as they were formerly called, which a few years ago could be bought quite cheaply from the marine store dealers, had been surreptitiously purloined by thieves, who for the sake of a few coppers had taken some risk even on a dark night. Some old houses are still rich in antiquarian door knockers, before the days of front door bells and electric pushes more a necessity than they are now. Their use was by no means confined to private houses, on which they figured in a variety of forms, but among the earlier examples are ponderous knockers of copper and brass, once regarded as an essential feature on the great oaken doors of cathedrals and churches and other important buildings. In the days when the precincts of certain ecclesiastical edifices were sanctuary, the knocker was the goal sought by the criminal offender who rushed to obtain the protection of sanctuary. One of the most famous historical knockers which has been copied by modern founders, and is seen in collections of so-called antiques and in use as a modern replica on room doors in twentieth-century houses, is the famous knocker which did service for so many years on the Sanctuary door of Durham Cathedral. It is a relic of great antiquity, having been placed on the door prior to the reign of King Stephen. Detailing its use as sanctuary a contemporary monk wrote: "Hereupon their leader violently and repeatedly struck the brass rings which hang outside the door." According to the "rights" of Durham all the churchyard and all the circuit thereof was sanctuary for all manner of men whatever

their offences had been. It will be remembered that in olden time, still perpetuated by its name, there was sanctuary just outside the Abbey of Westminster, the right being retained even after the dissolution of the monasteries in 1540. There were similar places of refuge for criminals at the Minories, Whitefriars, and the old Mint in Southwark. The Durham knocker, around which some interest centres, was in the form of an animal's head, in which are now two empty eye-sockets, behind which it is said lights were placed, although it is probable that they may have been filled with crystal balls.

The brass lion knocker of Brazenose College, Oxford, has won some notoriety, and has been much copied. The legends regarding its ancient association with the College, and the migration of the students to Stamford in 1334, and the subsequent return of the knocker to Oxford after it had been in other hands for many years, vary, and are not altogether borne out by proven facts. The brass-nosed knocker does not appear to have given the name to the College, notwithstanding the very generally accepted belief. Indeed, according to several authorities the name originated in the words *bracinum*, malt, and *house*, a brew-house having been incorporated in the older buildings. The old knocker, however, is still regarded as historic.

Few collectors of old copper and brass can hope to possess such historical relics, nor yet are they likely to secure any of the massive knockers, some of which are to be seen in the Victoria and Albert Museum at South Kensington. They can, however,

readily obtain brass knockers dating from the reign of Queen Anne, and especially the ornate knockers of Georgian times, many of them bearing traces of the Adams' style and of Chippendale influence. Some knockers are peculiar in that the design is not always apparent. In Fig. 16 is shown a fine knocker of the much favoured armorial style, and in Fig. 17 is given a drop knocker in the form of a dolphin. Some of the knockers, repeated in great numbers in certain districts, are essentially local, such as a hook and worm pattern, which took its origin in a Sussex village. It was the invention of a local smith, an admirer of Izaac Walton, who it is said frequently passed his smithy door on his way to a fishing stream. Technically described by a fisherman, this knocker is said to be "a lobworm of buxom proportions dangling from a hook." There are others, equally interesting examples, to be met with in out-of-the-way places. One of the advantages of collecting these common objects in brass and other metals is that they can still be made to serve a useful purpose on room doors, although the rat-tat of the larger specimens is sometimes startling.

"Shut, shut the door, good John! fatigued, I said;
Tie up the *knocker*; say I'm sick, I'm dead."

POPE.

Interior Metal-Work.

The collectable brasses (other than domestic kitchen brass and copper-work which is dealt with in Chapter VIII) belonging to the later period of art, and chiefly associated with the builder's furnishing and cabinetmaker's craft, include quite a

variety of interesting objects. In the days before Victorian times, when art almost died out, the coppersmith and the brazier produced some beautiful objects for the ornamentation and furnishing of the home, many of which have been handed down to us, and form valuable additions to a collection of metal. This period, as it has been already intimated, has been very much copied, especially just before the artists of the later Edwardian days struck out new lines and founded a school which has been called that of the "nouvre art." Now and then there have been attempts to blend the old with the new, and the collector of the genuine antique desiring purity of style in his specimens should not neglect any opportunities he may have of examining and comparing the various styles. The arrangements for lighting and heating houses were until quite recently inefficient. There was, however, still greater neglect in providing for the comfort of the attenders at churches, which were frequently cold and chilly. Attempts were made by individuals to remedy this, and among the curios associated with heating purposes are hand-warmers and foot-warmers. The earlier types of hand-warmers, or chaufferettes, were spherical metal boxes or balls, in the interior of which, by an arrangement of chains or rings, a cup containing a red-hot ball of metal or a piece of charcoal could be retained in an upright position. These portable warming stoves were also used in many houses and on many occasions. Reference is made to such warmers in Chapter XV, where a Dutch foot-warmer is illustrated. It is said that

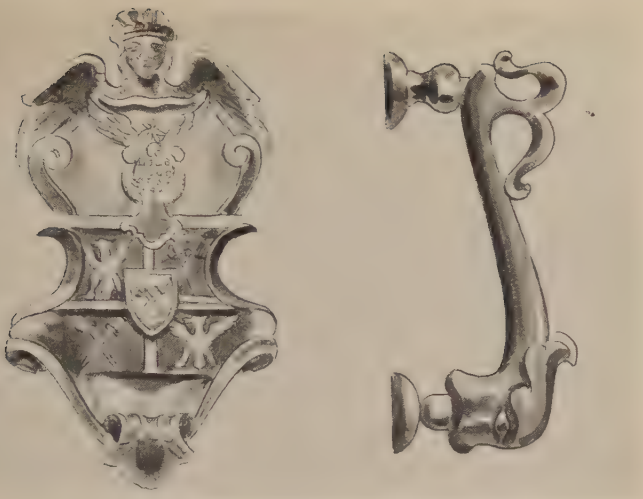


FIG. 16.—BRONZE KNOCKER OF THE ARMORIAL TYPE.

FIG. 17.—BRASS DROP KNOCKER IN THE FORM OF A DOLPHIN.

FIG. 18.—BRASS WELL BUCKET.

it was a common practice years ago for a servant man or maid to follow a lady when attending church, carrying a charcoal burner and placing it upon the floor at the lady's feet, then gracefully retiring into some less conspicuous part of the building until the service was over. In the days when streets were badly lighted lanterns were commonly hung outside houses and in entrance halls, some reference to the more portable types being given in Chapter IX.

The metal-work of the interior, such as lock plates, hinges, and door knobs, was frequently of brass, and very ornate some of these quaint old fittings are. Perhaps the most interesting are those which were much used on the more portable sideboards, corner cupboards, and chests. It would appear that the extravagance in design reached its height when Chippendale's influence extended to the metal ornaments on the furniture, as well as to the scroll-work and carving of the woodwork. Some of this metal-work gives evidence of Chinese influence, or as it was then called, Chinese taste, shown in the introduction of the mandarin and the fakir, Oriental landscapes, palanquins, and Chinese trees and flowers, even in English metal-work. The collector of such things finds a wealth of brass in even escutcheons and handle plates (see Chapter XIX).

There is some very rich brasswork in the frames of the old banner screens, made of beautiful needle-work panels, over which so much time must have been spent. A remarkably fine banner holder in the Victoria and Albert Museum is typical of many others. We have only to look round the house and imagine

how it looked a century ago to discover that the collectable objects of copper and brass, even when domestic utensils and curios have been removed, included many other objects besides those referred to which may be secured by careful and persistent search among the old shops and builders' odds and ends.

VII

CHURCH BRASSWORK

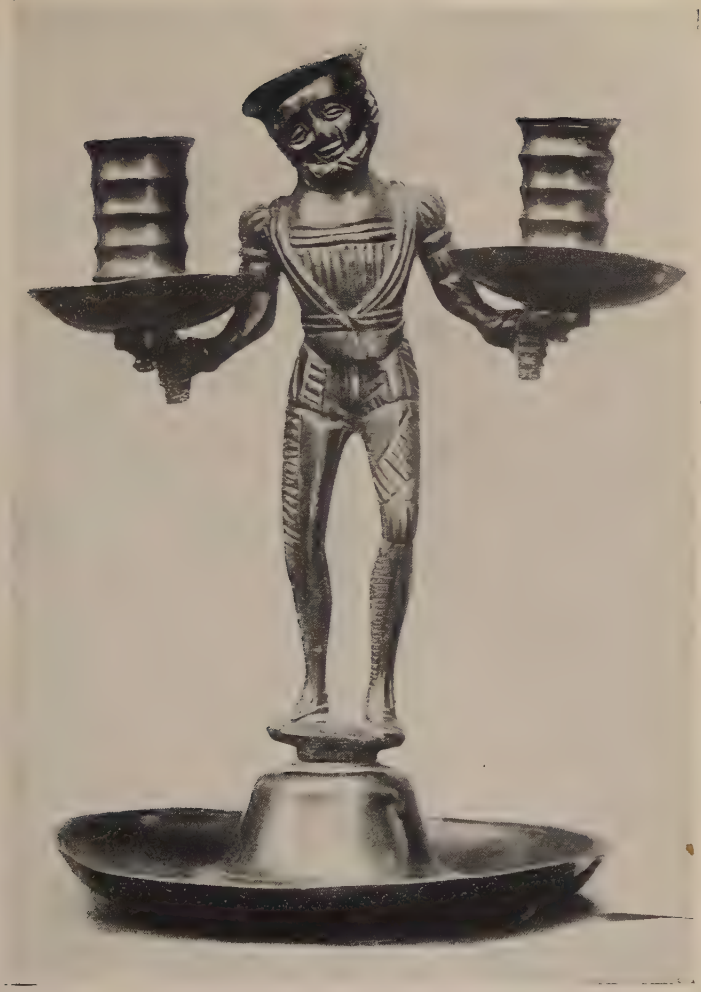


FIG. 19.—CURIOUS DOUBLE CANDLESTICK.

(*In the Victoria and Albert Museum.*)

CHAPTER VII

CHURCH BRASSWORK

Candlesticks—Altar brasses—Metal architectural ornament—Memorial brasses.

THE admirer of metal-work finds examples of the early brassworker's art in ecclesiastical edifices. Although in years gone by there has been spoiliation in many churches, and some of the most valued objects in sacred buildings have been taken for secular uses, there are still many treasured relics which are almost unique specimens of the metal-worker's art. It is a wonder so much has been preserved, for too enthusiastic authorities have often displaced the old and substituted newer objects of no antiquarian value. In the past in restoration work much that would have now been venerated as antique has been destroyed. The collector cannot be advised to bring pressure to bear on the ecclesiastical authorities in order that he may obtain such curios for his museum. Oftentimes the brasses in themselves would present no special interest. It is rather in their associations that the

antiquary sees much to admire, and to strip brasses from the wall or memorial tablets from tombs is vandalism and sacrilege which cannot be encouraged. There is, however, a peculiar beauty in the metal-work which may be seen and admired in old churches, and the massive grandeur of grilles, railings, and gallery fronts add to the beauty of such buildings as a whole. In addition to these architectural brasses there are many portable antiques, ornate and historical.

Ecclesiastical brasses may be divided into two groups. First, there are those which have been consecrated to religious purposes, including the sacred vessels of the altar and the metal symbols used in Divine worship, and then there are the metal objects which serve the purpose of ornament and to some extent utility. Among the more decorative pieces of the first group are processional crosses, many of which are very beautiful, in some cases being ornamented with precious stones and enamels. Then there are the crosses on the altar, if anything still more decorative, for in fashioning them, especially for use in connection with the old Gothic cathedrals and churches in this country and on the Continent in mediæval days, the artists concentrated their best endeavours to produce metal-work worthy of the sacred purpose for which it was to be used. Some of the bishops' and archbishops' crooks in the earlier days were made of ivory; then metal-work, richly chased and jewelled, came into vogue, and latterly some of the crooks are fine examples of the metal-workers' art.

Candlesticks.

The ornaments of the altar in Christian churches are for the most part simple in design. There are, however, many varieties of candlesticks, varying in size and degree from the larger ones which hold the Communion candles to the decorative seven-branched candelabra of light and tasteful design. The more important specimens are the massive candlesticks which are used in the chancel and in some of the larger cathedrals in other parts of the building. Such ecclesiastical bronzes are seldom obtainable, although there are some fine examples in the Victoria and Albert Museum in this country, and in the chief Continental museums. The donors of such objects spared no expense, and the modellers and founders treated such work very elaborately. Flemish and Spanish churches are especially rich in large candlesticks, and many of the Continental cathedrals possess wonderful examples. The prominence which has been given to candlesticks in public worship dates back to a period long before the foundation of the Christian Church, for the seven-branched candlestick was an important feature in the Jewish ceremonial. When the Roman conquerors took possession of Jerusalem, among the treasures taken from the Temple on the sack of the city, they carried away the golden candlesticks from the altar. So important was this sacred trophy that it was represented on the triumphal arch of Titus, preserving to the artists of the future its general characteristics of design.

The great bronze candlesticks in St. Paul's

Cathedral and in other English churches are to be admired but not collected; nevertheless there are some fine candlesticks in bronze and of polished brass offered for sale in the curio shops, and from time to time brought under the hammer in the London auction rooms. The illustration given in Fig. 19 is a remarkable example which may be seen in the Victoria and Albert Museum. A fine Venetian bronze candelabrum (one of a pair), now in a private collection, is shown in Fig. 20.

Altar Brasses.

Most of the church plate so-called was of pewter and silver in early times; in more modern days of silver, and sometimes of metal plated with silver. There are, however, examples of metal chalices of bronze, some of which have been found in Ireland. The altar brasses in pre-Reformation days included brass censers and incense vessels, very interesting examples of which are now in the Victoria and Albert Museum, being illustrated in Fig. 21. Of vases and other decorative altar brasses there are many. Some, probably, took their origin in older customs and were symbolical; the vases nowadays are for the most part used as receptacles for flowers.

Bordering on the secular vessels, yet associated with the altar, there are the alms-dishes, of which there are a great number in private collections of metal. They are mostly of brass, some quite plain, others engraved and highly ornamental. Some little time ago there was a special display of alms-dishes, two-score or more in number, exhibited at the Kel-

FIG. 20.—VENETIAN CANDELABRUM (ONE OF A PAIR).

vingrove Exhibition at Glasgow. Some were covered over with scriptural pictorial designs, among the favourite being those illustrating the old story of Adam and Eve in the Garden of Eden; the episode of Samson and the lion; and the visit of the two spies to the Promised Land, returning carrying a large bunch of grapes. Such alms-dishes vary in size, seldom less than 12 in. in diameter, but ranging up to 20 in. Sometimes the collector is puzzled to find what he may regard as inappropriate mottoes on church vessels. On the other hand, it is not an uncommon thing to meet with religious devices or pious mottoes on platters and bowls which were obviously used as domestic vessels. This fact is explained in that at one time there was but little difference between secular and ecclesiastical plate, and the vessels were often used indiscriminately for church purposes and for the use of the household.

Metal Architectural Ornament.

The lectern is frequently of bronze or brass. The eagle with spread wings or other designs adopted by the metal-workers gave the artist plenty of scope. The altar rail and in a few instances the metal screen and grille are composed of elaborately chased brass or copper-work, sometimes cast, at others hammered. Perhaps one of the greatest achievements of the coppersmith in connection with church metal-work is the ball and cross of St. Paul's, surmounting the great dome. It was made in the year 1821 by Benham and Froud, an old firm of coppersmiths.

An illustration of this gigantic piece of work is given in Fig. 22. When viewed from beneath few would imagine that the cross, although so high up, is 30 ft. in height, and that its weight is upwards of one and a half tons. The occasional gilding of this triumph of the coppersmith's art is in itself a costly procedure.

Memorial Brasses.

The visitor to the country church, as well as the larger cathedral, finds much antiquarian interest in the tombs and monuments, and in the memorial tablets of the illustrious dead the history of their lives may often be read. In the older tombs the work of the sculptors in marble is frequently enriched by the addition of appropriate tablets of brass, sometimes inlaid with enamels. One of the most noted tombs is that in the centre of the chapel of Henry VII. in Westminster Abbey, the tomb itself being closely guarded by the massive railings, which are of brass. The visitor to that chapel notes with interest the brass stall plates so rich in enamels, on which are the arms and crests of the knights who in times past occupied those stalls and hung their banners over them.

It may be contended that tombs and monuments cannot be collected, but those who visit such places may fill their notebooks with interesting data, and they may carry away with them accurate records and rubbings of the monumental tablets and the brasses on the tombs (for instructions how to take rubbings, see Wrinkles, p. 393). Such rubbings of

FIG. 21.—BRONZE INCENSE BURNER AND INCENSE BOAT.

(*In the Victoria and Albert Museum.*)

old brasses can be kept in a portfolio or mounted and hung upon walls. They form a record, too, of the engraver's art, which was modified and altered to suit the change which went on in architectural design and to some extent in social and religious customs. The variety of brasses is seen when a good collection of rubbings is classified and arranged according to style, period, or locality. Some districts yield prolific returns. Throughout the counties of Gloucester, Somerset, and Norfolk many may be obtained, the more interesting specimens being secured from tombs dating from the thirteenth to the seventeenth century. From such a series armorial representation as it became less real and of smaller importance can be traced. The costumes of the period, too, are very clearly shown, for in such a collection of brasses the value of armour in war is seen to change. In the earlier examples there is the chain mail of the cross-legged knights as seen on the early brasses of the Crusaders, the mediæval armour of the Middle Ages when it had reached its strength, and the brasses of the Stuart days when the ornamental armour of that period had to a large extent lost its utility.

The ecclesiastical brasses on the tombs of bishops and other church dignitaries show the change which took place very gradually in the vestments worn, and indicate the alteration in ecclesiastical ritual in the cathedrals and churches at the time of the Reformation. The dissolution of the monasteries and the sacrilege which took place in the dismantled churches and religious houses caused

valuable relics to be sold for old metal, and it was then that many old monuments and tombs lost their brasses. The influence of book knowledge and the change which came about in the style of script after the introduction of the printing-press is seen in the evolution of the lettering on church brasses. Indeed, in some of the older ones the form of the letters is the only indication left of the date of their engraving.

The engraver's art progressed with the art of the period in which he lived, and in a collection of rubbings may be seen the gradual training of the eye and hand until from meaningless pictures without background or perspective the artist was able to engrave on metal a beautifully realistic picture of the subject he had chosen. As a guide to a few indications of the period to which brasses belong, it may be mentioned that the decorative canopies on monumental brasses belong chiefly to the ornate period of art. The embattled canopies and the change to the decorative Gothic tell of the progress in ecclesiastical architecture until it reached its height between the fourteenth and fifteenth centuries, later brasses telling of its gradual decadence. Of the variety of subject it would be impossible to refer, for at all ages there have been many who would fit into niches between the extremes of the early fighting men amidst the nobles and knights who fell in battle, and those who apparently lived all their lives in the peaceful rural surroundings of some quiet English village, dying within sight of the old church where they

FIG. 22.—THE COPPER-GILT CROSS ON ST. PAUL'S CATHEDRAL.

had worshipped, and where they were eventually buried.

"When some proud son of man returns to earth,
Unknown to glory, but upheld by birth,
The sculptor's art exhausts the pomp of woe,
And storied urns record who rests below;
When all is done, upon the tomb is seen,
Not what he was, but what he should have been."

BYRON.

VIII

DOMESTIC UTENSILS

CHAPTER VIII

DOMESTIC UTENSILS

The kitchen—The houseplace—Chimney and other ornaments—Classified arrangement.

A COLLECTION of metal-work representative of domestic utensils as they were fashioned in very early times, and as they were made in days so far forgotten as to render the common objects of daily use curios, is regarded, probably, as the most important branch of copper and brass, from a collector's standpoint. The collector may be content with gathering together a few examples of old domestic metal-work and using them as ornamental reminders of olden time, decorating his entrance hall or rooms furnished after the antique with the objects he gathers together, or he may arrange them as in a museum gallery. The display of curios is at all times a matter of taste, but it is one of some importance, especially in a branch of collecting so conspicuous as copper and brass. We can scarcely conceive of any real pleasure being derived from such a hobby, or of such specimens being appreciated by one's friends, when specimens so obviously out of place

are shown in a modern dining-room or drawing-room furnished in nouvre art. The Keeper of the London Museum, now transferred to Stafford House from Kensington Palace, has very appropriately arranged the antiquities of London in their proper historical and chronological sequence, and has grouped them so that the reference they bear to contemporary surroundings can be understood by those who see them for the first time. The photograph which we reproduce in Fig. 23 represents a corner in a well made up seventeenth-century room, in which has been gathered together some beautiful old oak furniture of that period. It is panelled with oak which has been procured from old London houses of contemporary date; the doorway is a genuine antique from Bromley-by-Bow, adding to the appearance of the room, for its hinges and lock furniture are splendid examples of the brasswork of that period. Some pieces of Cromwellian armour, prominent among which are variously ornamented helmets and breastplates, are arranged round the upper portion of the room. Over an old oak chest is a beautiful brass skimmer, and on the wall a seventeenth-century brass bed-warmer, with engraved cover. On the sideboard is a huge key and a brass mortar. The lock furniture and the drop handle on the sideboard, which are of brass, are worthy of note. On the other side of the room there is a fine brass trivet standing in front of the hearth, on which are andirons, and logs ready for the firing; close by is a quaint old candlestick. Undoubtedly curios displayed in such a way interest and instruct those who

FIG. 23.—SEVENTEENTH-CENTURY ROOM IN THE LONDON MUSEUM.

see them, and a room so furnished enthuses collectors with the desire to secure other objects of an appropriate character; this in itself is an advantage in that a representative collection is of more general interest than one containing many objects of a similar character.

The Kitchen.

Kitchen utensils and domestic appliances which the housewife of olden time deemed necessary are of peculiar interest in that they help us to recall the habits and customs of former generations. It is not always easy to arrange a model kitchen in that there are many old utensils of copper and brass which must have been used side by side as periods overlapped, although some have a much older origin than others. It is said that the kitchens of well-stocked old family mansions still yield some curios when thoroughly examined, and that it is not at all an uncommon thing to find there utensils the object of which has almost been forgotten. They are relics of an older day, and utensils which a modern cook would not deign to use. Such discoveries, however, are few and far between, for the melting-pot and the cupidity of those anxious to clear unnecessary encumbrances and perhaps make a little towards refurnishing, has left but few objects of interest in the kitchen. It is, however, there and in the old houseplace that we may look for something of interest. Some will go on using old vessels long after newer utensils have taken their place in the more advanced households, and there are some

cooks who use successfully saucepans and kettles of almost antique pattern which the student of the cook's art in the modern schools of cookery would find difficult to manipulate. They have been taught how to make tasty dishes with aluminium vessels and enamelled pans, whereas heavy and clumsy brass and copper utensils served their grandparents. The cook's art is appreciated to-day as it was in the past, and at all periods the domestic workshop has been surrounded with a halo of romance. Shakespeare has rendered the caldron of olden time memorable in "Macbeth." Of the caldron boiling in the dark cave he makes the witches cry :

> "Double, double toil and trouble,
> Fire, burn ; and caldron bubble."

The cooking-pot is the sustainer of life, in that it gives strength to the weary and to the starving. To the poor dumb creatures, however, it is the end of life, and in savagery human life has been sacrificed to the gluttony of fellow-men. Wonderful stories are at times told of great feasts and of the magnificence of the kitchens of olden time, where the vessels and the cooking-pots were of extravagant size, making up, perhaps, for the fewer culinary utensils, for in early days the furnishings of the kitchen were few in number although massive and strong. Many of the baronial halls of the Middle Ages, and the homes of wealthy landowners in more recent days, have been the scene of great feasts. Merrie England rejoiced on such occasions when the roasting-jack and the spit contributed to the

FIG. 24.—BRONZE CALDRON.

(*In Trinity Hospital, Leicester.*)

success of the feast, and the caldron or cooking-pot boiled upon the open hearth. In some old kitchens there are preserved ponderous bronze and copper pots, some so large that we can scarcely imagine that they were made for actual use. In the hall of Trinity Hospital at Leicester there is preserved a large caldron of bell metal, holding upwards of sixty gallons, which has been used as the cooking-pot of the institution from its foundation until quite recent times. This quaint old relic, now venerated as a curio, is locally called the Duke of Lancaster's porridge-pot, for it is said that it was made to the order of Henry, Duke of Lancaster, in 1331 (see Fig. 24). Not far removed from the corner where the old metal pot is shown to visitors there is a massive nutmeg-grater, a kitchen relic of olden time, which on the occasion of one of her visits to Leicester Queen Elizabeth presented to the hospital. Many old castles have relics of the feast to show visitors, and others no doubt could produce equally interesting examples of the coppersmiths' or the founders' art were they to search the vaults and cellars where disused metal-work was in years gone by stowed away. Visitors to Warwick Castle are familiar with "Guy's punchbowl," the remarkable metal caldron which is nearly twice the size of that attributed to the Duke of Lancaster, for it weighs, along with a fork said to have been used to handle the meat, 807 lb.

Most of these old vessels were cast, but some copper-work was hammered by hand, and those which have been preserved to us testify to the brawny arm of the smith and the strength of his

blow when by hammer and hand he wrought them. Such copper caldrons were often made in two or more parts, and having been shaped on the block, were afterwards riveted together. It is puzzling at times to understand local and trade terms in that they frequently differ from the commonly accepted names of cooking vessels. Thus, these wrought caldrons or pots were frequently designated tripod kettles. A very fine example of such a wrought copper kettle was recovered a short time ago from Whittlesey Mere and is now in the Peterborough Museum. A century or more ago the Mere was famous in Huntingdonshire and many water parties were held there. The kettle recently found is thought to have been a relic of those events, and to have been used on the margin of the lake.

The fine caldron of cast brass illustrated in Fig. 27 was found during excavations in Water Lane, in London. It is peculiar in that it has two-eared handles and projecting feet. It is very substantial, and may be regarded as typical of the early metal caldrons, several of which have been found in London. Another cooking vessel, smaller in size, having a curved handle and being in good preservation, a domestic relic of the seventeenth century, which was dug up in Milton Street, Cripplegate, is illustrated in Fig. 28.

Reference has been made to the baronial halls, and to the numerous relics which have been lost to futurity. There are, however, some well-known castles where, although the kitchens have been replenished from time to time, the older forms of

FIG. 25.—SEVENTEENTH-CENTURY BRASS PAN.

FIG. 26.—BRASS TRIPOD POT.

FIG. 27.—CALDRON OF CAST BRASS.

FIG. 28.—BRASS COOKING VESSEL WITH CURVED HANDLE.

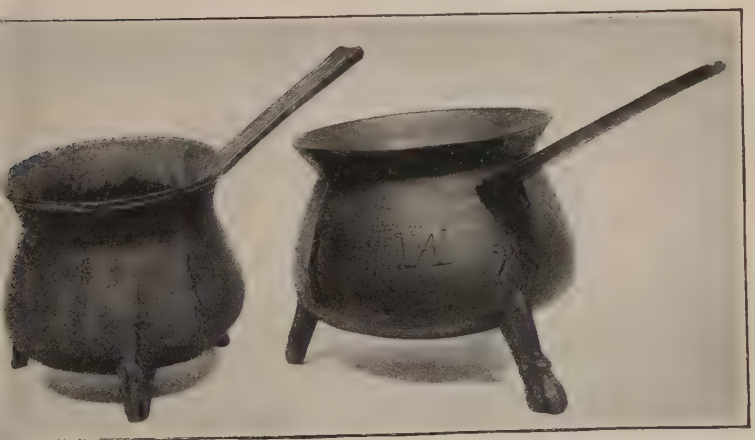
cooking vessels have been perpetuated. Until recent days the kitchen arrangements at Windsor Castle remained much as they had been for many years previous, and even now copper and brass retain a favoured position and are very much in evidence. Windsor has been the scene of much feasting, and many great State events have put a strain even upon the domestic resources of that famous Royal residence.

The great kitchen of the castle is supplemented by a vegetable kitchen, a green kitchen, and a scullery, and around these rooms there is a bright array of copper pans and cooking utensils, mostly bearing the monogram of George IV, for it was in his reign that many new culinary appointments were added. These vessels, large and small, were in constant use during the reign of Queen Victoria. Her late Majesty was averse to change. In her days oak out of Windsor Forest was burned in the grate, and the spits and roasting-jacks and other kitchen accessories were in keeping with the copper and brass pans and kettles. Great changes have been made since the accession of George V, for Queen Mary supervises the management of the Royal kitchens, and many modern cooking vessels have been substituted for older ones.

The collector of copper and brass culinary utensils has seldom an opportunity of adding the large bronze caldrons and relics of Royal kitchens to his collection. He has to be content with exploring lesser domains, and securing wherever possible the smaller cooking vessels of days gone by. These

are frequently quite as interesting as those of larger size, and there is a wealth of copper still lying dormant in antique shops, and in some instances in the scrap-heaps of the old metal dealer. Without going any further back the saucepans of the seventeenth century well reward the discoverer of such relics. That century was a time when pious mottoes were carved upon the lintel beam and when old coffers and other pieces of massive oak were decorated with such sentiments. The brassfounders followed suit and ornamented pots and pans, and enriched them with mottoes just as they cast such inscriptions on bells and mortars. Two very interesting seventeenth-century vessels are illustrated on p. 165. One of these, Fig. 25, was discovered some years ago in Fetter Lane, and is now in the Guildhall Museum. The other, Fig. 26, is a tripod pot, the handle of which has a loop near the bowl. It is probably of early seventeenth or late sixteenth-century workmanship. The brass skillet of seventeenth-century make, illustrated in Fig. 29, may be seen by the curious in the British Museum. There is no uncertainty about its date, for it is marked 1684, and along the handle is the quaint motto "Pitty the Pore." Collectors may be reminded that inscriptions are sometimes stamped; at others engraved, and they are frequently met with on quite unimportant vessels. The metal used for such utensils was chiefly of brass, but often of latten, an alloy in which there was an admixture of zinc, or of tin in what was known as white latten. As it

'i. 29.—SKILLET (BRASS), THE HANDLE OF WHICH IS ENGRAVED WITH THE MOTTO "PITTY THE PORE."



'S. 30 AND 31.—BRONZE COOKING VESSELS, ATTRIBUTED TO THE BEGINNING OF THE SEVENTEENTH CENTURY.

(*In the British Museum.*)

has been stated already, brass came into vogue late in the sixteenth century, and soon became popular for kitchen utensils; latten, however, was a favourite alloy for spoons and the smaller objects, especially for porringers for mulling wine. Concurrent with the use of copper and its modern alloys bronze appears to have been used in this country even as late as the beginning of the seventeenth century, the cooking vessels illustrated in Figs. 30 and 31 being bronze of this late type.

The skillet, which continued a favourite vessel, commonly called a saucepan, originally had three short-curved feet, and the handle was curved, too. It was a development of a still earlier cooking vessel; its prototype of the sixteenth century having a globular body with short-curved feet, and frequently two handles.

The twentieth-century collector, accustomed as he is to machine- and factory-made goods of uniform finish and of regular shapes, is apt to be a little bit disappointed with the copper curios roughly made and badly formed. It would appear as if most of the collectable copper goods were made after the days when the old guilds so carefully controlled the making of copper and latten in Lothbury. When their power of control waned, craftsmen who had been employed by guild members worked for themselves, and there was but little supervision over the metal wares made by the coppersmith, who was often a retailer of his own wares. When the hardware dealer or copper man became an established trader in the eighteenth century he would employ a

journeyman coppersmith in his little workshop, who would fashion the utensils with a hammer on a wooden block, and afterwards planish them by hand as he thought fit. In the making of such goods there was great irregularity, and the dealer and his customer, too, were dependent upon the whim of the craftsman. That was before the days of machine-made goods. Instead of the brass or copper being pressed and stamped by machinery and carefully finished the utensils were made in a rough and ready way on the wooden block, and simply hammered in the rounded cavities which had been made in it. Saucepans, stewpans, and jelly moulds were beaten into shape, and then hollowed and dished. It is said it was a healthful trade, for many of the old coppersmiths had passed their threescore years and ten shaping kettles and deftly fashioning from a sheet of brass even quite ornamental domestic articles of utility; they would decorate by hand a brass chestnut roaster with no other tools but a small hammer and a punch, and with the same simple instruments they would work a fancy pattern on the lid of a warming-pan. Some coppersmiths won fame in the fashioning of furnace-pans, better known as washing coppers, and others would undertake the roofing of houses and churches. One notable firm in London, whose copper saucepans and cooking-pots had been sold for a hundred years or more, achieved the zenith of their fame when they produced that enormous piece of copper-work, the ball and cross of St. Paul's Cathedral, which is referred to and illustrated in another chapter.

FIGS. 32 AND 33.—COPPER WATER JUG AND WATER POT.

FIG. 34.—COPPER WATER JUG AND COVER.

FIG. 35.—BRASS TWO-HANDLED WATER VESSEL.

There is yet another reason given why so many of the old copper pots and pans are irregular in shape and are often fitted with apparently unsuitable handles. It is that most of these old vessels at one time or another have undergone repairs, and were frequently treated by unskilled workmen. Among the street cries of London one of the oldest was: "Any pots or pans to mend?" The travelling tinker was a repairing coppersmith, too, and much of his time was occupied in mending the copper and brass cooking utensils used at the farmhouses and in the villages through which he passed. His methods of dealing with the vessels entrusted to him for repairs were not always the best, as museum relics testify.

Drinking cups, tankards, and flagons constitute another very important section of collectable curios. They were, however, chiefly made of pewter in the days before glass and earthenware became general. Some were undoubtedly of copper. This metal, however, was chiefly used for large jugs in which water and other liquids were carried. Water vessels vary in shape, although certain characteristics are frequently noticeable. The typical English-made jug and water vessel, such as those shown in Figs. 32, 33, 34, and 35, are very graceful in shape, the handles being light and very suitable. They make remarkably welcome additions to a collection of metal, and are appropriate ornaments on an old oak sideboard.

The Houseplace.

It is not a far remove from the kitchen to the

houseplace, and it is there that some of the more decorative brasswork of eighteenth-century workmanship is chiefly to be found. Just as copper and brass formed a prominent feature in the equipment of the kitchen, so in the old houseplace they were considered the best for ornamental purposes. The polishing of the metal-work throughout the house in the good old days must have been a considerable item in the duties of domestic servants, but no doubt it well repaid the labour, for from the old ornaments and usable curios of the houseplace which have come into the hands of collectors, especially when housed in a reconstructed eighteenth-century room, the effect is excellent. The metal-work of the best parlour was not so extensive, although there were many beautifully polished coal-vases and fender frets. Indeed, in both rooms mentioned the chief attraction would appear to have centred on the fireplace.

The story of the evolution of the grate and the hearth and its appointments is of extreme interest. The grate itself was at times ornate with polished brass beads and canopies. The older type of fireplace was mostly fitted with iron appointments, but even when andirons were upon the hearth and logs of timber crackled as they blazed up the wide old chimney, the dogs or chief ornaments of the hearth were often of brass or bronze. When hob-grates and registers came in fashion, ormolu and brass ornament contrasted with polished steel. A typical parlour hob-grate of the eighteenth century would be ornate with brasses on the hobs, a pierced brass fender on the stone slab, and a polished brass ashes pan in front

FIG. 36.—A FINELY-PIERCED BRASS TRIVET, DATED 1668.

FIG. 37.—BRASS-TOPPED TRIVET, WITH ADDITIONAL LEG STAY.

FIG. 38.—BRASS-TOPPED TRIVET, WITH TURNED WOOD HANDLE.

of the bars to hide the cinders. The trivet or revolving stool, small or large, was in the fender or on the hearth, and massive fire brasses (not irons) filled the empty spaces.

The brass trivet, revived in modern times, was originally a three-legged stool made of metal, on which a kettle or similar vessel could be placed near to the fire. The convenience of being able to put the trivet stool quite close up to the bars suggested to the maker of such things the addition of hooks by which the trivet could be hung upon the bar, thereby bringing it nearer to the heat. In later years the trivet developed a handle for the convenience of moving it about, and especially of hanging it upon the bars, and in the latest completed form with turned wood handle, iron legs, and brass fretted top, the trivet was regarded as an essential accompaniment to the fire-grate. From the three-legged stool with hooks or handle there came a minor development in the form of a light portable trivet without legs, which could only be used when hung on the bars. These varieties presented the worker in brass with an excellent opportunity of showing his decorative skill, and brass trivet tops soon became very ornamental. Fig. 36 represents a finely-pierced brass trivet, with tall legs and pointed feet and a turned wood handle. On the top of a baluster-shaped device, supported by dolphins, Atlas is represented bearing on his shoulders the globe. The date of the trivet is 1668, and on the top is also engraved the owner's monogram. Another very interesting example comes from Derbyshire, and is shown in

Fig. 38. Yet another example is given in Fig. 37, this being a more elaborate design. In the centre of the plate an eagle is represented with outstretched wings. The construction of this trivet is somewhat unusual in that it is strengthened with a cross-bar; the feet are of spear-head shape. All three examples are to be seen at South Kensington.

There have been many modern replicas of the beautiful old brass helmet-shaped coal-boxes so common half a century ago. The earlier types varied somewhat in shape, but always preserved their helmet-like form, as illustrated in the example shown in Fig. 39. In the days when these coal-boxes were fashionable, miniature pipkins were sold for drawing-room use, and a little later oblong and oval boxes of polished brass and copper were in common use; in some places the brass log boxes taking their place, especially where wood was plentiful.

It is probable no domestic utensil or appliance has gained greater notoriety than the copper and brass warming-pan, which so long held an honoured place in the chimney corner. It was used nightly in winter for warming beds in the often large and chilly rooms, both in the homes of the wealthy and of the middle classes. One of these pans is represented in Fig. 23 on the wall of the seventeenth-century room already mentioned as being on view in the London Museum. Another very handsome warming-pan, which is in the Victoria and Albert Museum, is very exceptional in style. Many of the earlier examples are dated, and sometimes en-

FIG. 39.—COPPER HELMET-SHAPED COAL-BOX.

graved or embossed with pious or loyal sentiments, as was the custom of the times. The Royal Albert Memorial Museum at Exeter contains several interesting warming-pans; one, which is dated on the lid 1622, is engraved: "I.R. GOD SAVE KING JAMES"; another, with an iron handle, is of still earlier date, being stamped 1616 on the lid.

Brass foot-warmers were at one time in regular use; a very fine example, shown in Fig. 40, is of octagonal shape, covered with repoussé decoration, and fitted with a folding bail handle, facilitating its removal from place to place. There have been many copper foot-warmers, carriage warmers, and the like used in days before modern heating arrangements were known. Some years ago little copper muff-warmers were sold in the shops; but they were of no great novelty, for as far back as the seventeenth century what were known as warming boxes were made for keeping the hands warm on journeys when travelling by the very cold and draughty stage coaches. These curious little boxes of brass or copper were heated with a removable mass of iron, which could be lifted out of the box, which hinged in the centre, by means of an iron hook; just in the same way the old box irons were operated. In Figs. 41 and 42 one of these early boxes, which may be seen in the Guildhall Museum, is illustrated. Thus in olden time the comfort of travellers was attained. The old inns were welcome retreats after a stormy journey by road, and the older inns of the coaching days often contain many interesting relics of the

days when the copper and brass objects we now call curious and old were new. Those objects referred to in the previous paragraphs by no means exhaust the list of houseplace curios in metal, but they may serve to point out the great interest which attaches to even common objects of everyday use when a few years have passed by and changes have been brought about in everyday usages.

Chimney and other Ornaments.

As it has been intimated already, the fireplace was a centre of attraction in all old houses. It was customary on a winter's night to draw up close to the fire, and in so doing it was only natural that the chimney piece and those objects which rested thereon would be constantly looked at. This probably gave makers the cue when designing ornamental brass-work which could be used as household decoration. The ornaments of those days were substantial, and the chimney ornaments solid and lasting. It was a common thing to see a row of brass figures or pairs of brass ornaments on the chimney-piece. Such designs as those shown in Figs. 43 and 44 were popular. Our illustrations represent one only of each fashion; the pairs, however, were usually designed opposite hands, looking to right and left. Such ornaments were seen on the kitchen mantelpieces of the well-to-do and on the hob-grates of the houseplaces of the middle classes. This was the prevailing custom from fifty to seventy years ago, and still earlier similar ornaments, cruder in design, evidently modelled after the style of the Bow pottery

FIG. 40.—BRASS FOOT-WARMER WITH BAIL HANDLE.

(*In the Victoria and Albert Museum.*)

FIGS. 41 AND 42.—EARLY BRASS OR BRONZE HAND-WARMER, SHOWN OPEN AND CLOSED.

(*In the Guildhall Museum.*)

igures, were in use. In Lancashire and in the manufacturing districts of the Black Country brass ornaments of similar and more modern types have always been favoured, and they are still sold as ornaments to well-to-do artisans and mechanics. The modern castings are rougher and not so decorative or beautifully designed as the tooled castings of earlier days. The peacock was a favourite bird and shared with the pheasant popularity. These designs are easily recognizable among the genuine antiques. There were larger animals, too, such as the horse, an example of which is given in Fig. 45. This favourite beast of burden was oftentimes represented as a dray horse; in more sporting circles as a hack or a hunter. In agricultural districts the wagoner, the huntsman, and dogs and hounds were chiefly favoured. They were generally set on a base or plinth, an exceptionally good country brass of the earlier type representing a shepherd with his typical crook. Little statuettes represented politicians and historical and even allegorical figures. Among the portrait brasses Napoleon was a favourite subject in the days when his name was familiar in every household. Izaac Walton, the exponent of the gentle art, was often modelled in brass, and even Robinson Crusoe and his man Friday formed the subject of a rare group. The Continents of America, Africa, and Asia are rare and interesting allegorical groups. Other brasses show traces of Chippendale influence, especially those in miniature which represent familiar household objects, among which are wonderful little models of circular tables and of the oval loo tables, like those

then seen in the best parlour. There are also miniature brass trivets and stools and models of grandfather chairs.

Brass ornaments such as those described are not altogether confined to chimney ornaments, for on a larger scale they were frequently used on the old hob-grates, the polished brass or copper contrasting with the shining blacklead put on with plenty of elbow grease. They were used, too, as door porters and also as sideboard ornaments. The ornaments of the early nineteenth century in metal were, however, almost entirely associated with utilitarian purposes, the artist decorating the commoner objects, giving special attention to the repoussé work and engraving on those portions which would be in view when the dustpan, warming-pan, hearth brush, or other object was hung up.

Classified Arrangement.

In addition to those articles mentioned in the foregoing paragraphs there are many domestic utensils highly decorative, such as candlesticks and lighting apparatus, referred to in other chapters in this volume. These all come under the special notice of the collector of copper and brasswork who turns his attention to domestic antiques. Such collectable objects as already suggested should be arranged in a room furnished in similar style to that prevailing at a time when these metal curios were in daily use. If such a room is not available an alternative method is to arrange the domestic curios so that by comparison the progress made by makers as each succeeding

FIGS. 43 AND 44.—BRASS CHIMNEY ORNAMENTS (ONE EACH OF PAIRS).

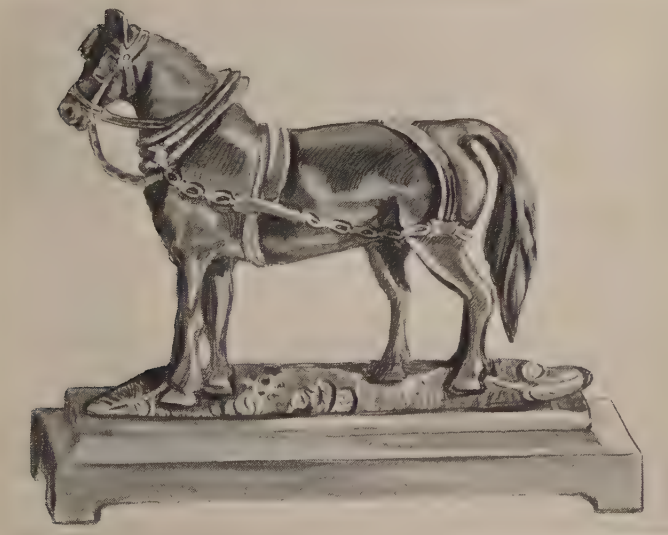


FIG. 45.—BRASS HORSE, A CHIMNEY OR HOB-GRATE ORNAMENT.

generation came and went can be seen and appreciated. Incidentally that method is very interesting in that it reveals the periods at which art was uppermost, and indicates those times when the utility of domestic copper and brass was in the ascendant rather than their ornate appearance. Popular taste was followed by the maker at all times, and the more progressive manufacturers were ever on the look-out for some slight improvement either in design or decoration—seldom, however, making any radical change—so that the progress in metal-work was one of development slowly unfolded.

ANDLESTICKS
ND LAMPS

CHAPTER IX

CANDLESTICKS AND LAMPS

Fire-making apparatus—Candles and candlesticks—Oil lamps and lanterns.

ARTIFICIAL light and heat were among the first scientific discoveries of primeval man. To harness the forces of Nature was undoubtedly a great achievement, and at first would be viewed with alarm. The fire which had been kindled from natural causes would be looked upon with awe by the cave men or the dwellers in the forest. When they saw it dying down they would very naturally make some effort to keep the fire burning by adding fresh fuel. The time would come, however, when lighting a fire by artificial means would be resorted to; and the methods adopted in those far-off days involved the use of primitive contrivances, some of which are described on the next page. The fire burning under the camp kettle would in course of time suggest a flaming torch, which could be carried about at will; and from the torch, which burned all too quickly, came the discovery of oil lamps and the candle. At first this was only a rush-

light, used side by side with the cresset torch; and then in later days came lamps and lanterns.

Fire-making Apparatus.

The collector of copper and brass looks with regret on the early fire-making apparatus in that iron was the chief metal employed. Nevertheless there are some objects associated with fire-making manufactured in brass. There are some well-known collectors who have specialized on fire-making appliances and early lamps. Among fire-making appliances are those of the percussion type, commencing with iron pyrites, flint, steel, and tinder. Some of the earlier tinder boxes were made of brass, although the majority were of wood and tin; many of the pistol-action tinder boxes which immediately followed the earlier form were furnished with stands and candle-sockets, being used for the purpose of lighting an early candle. Some of the brass candle-stands and candle-sockets are beautifully engraved, and many of the contrivances which were fired by the priming of gunpowder, the flash igniting the tinder, are highly ornamental. That method, of course, marked an advance. There are pistol-action tinder boxes from Japan, highly ornamental, the cases being pierced and in some instances decorated with raised silver and copper relief. From China and Central Asia come tinder pouches, many of them having decorative brass mounts, some being gilt on copper. Tinder was often carried about in tubes of brass and copper, some of the best examples being very elaborately engraved. In some small compartments are found; these were

FIG. 46.—A TWO-TUBE CANDLE MOULD.

FIG. 47.—TWO TYPES OF EARLY PRICKET CANDLESTICKS.

intended for the flint and steel. A later type of mechanical fire-making appliance, introduced by Richard Lorentz, in 1807, took the form of a patented compression tube or fire syringe, the piston of which was of brass. Chemical methods of lighting fires and striking lights have been tried with more or less success, and among the collectable curios are relics of these early attempts to produce fire and light by scientific methods. The collector, while welcoming every curious object, has generally to rely upon the objects which were in common use and made in larger quantities. Of these commonly used appliances, however, there are many varieties, and of the more perfected forms of lighting requisites there is an abundant choice.

Candles and Candlesticks.

Many are the legends and stories of the days when the flickering light of a candle threw shadows across the ceiling and partly lighted and partly obscured the table and floor. Ghostly, too, they seemed as the embers of the fire died on the hearth. The provision of artificial light for use during the long winter evenings has always been one of the domestic cares, and the women of the household were in early days mindful of the coming winter during the summer and autumn months. Among their domestic duties was that of gathering and drying rushes and dipping them in fat. The primitive rushlights gave an uncertain glimmer, and the moulding of candles with cotton wicks would be welcomed as an advance. Candles were home-made until comparatively modern times,

and the candle mould was an essential in every household. It was frequently of brass, and varied in size and in the number of moulds, the one shown in Fig. 46 having only two tubes. While the custom of making candles at home continued long in country districts, in towns candle-making became a trade, and, as was the custom in those days, the moulders of candles assembled together in certain well-known thoroughfares. In London, Candlewick Street, the name of which has since been corrupted into Cannon Street, was their rendezvous.

The store of candles for immediate use was kept close at hand in the candle box, placed against the wall in some convenient position. The boxes were of wood and japanned tin; others were of brass, some being very ornamental and covered over with engravings. Such candle boxes are to be found in the curio shops; several fine examples may frequently be seen near St. James's Park Station in London, where there are several curio dealers who specialize on old copper and brass, the neighbourhood being quite a happy hunting ground for the collector of metal.

The evolution of the candlestick was slow at first. The old rushlight-holders were made by the country smith, and very clumsy they were on their heavy wooden stands. The first idea seems to have been to stick the candle on a spike, oftentimes such spikes being placed conveniently on the wall. Then came the "sticks" on stands which could be moved about the room, in some cases with a sliding holder, the height of which could be regulated. Gradually, however, the candlestick for table use and the candle-

FIG. 48.—CANDELABRUM OF EARLY TYPE (CENTRAL FIGURE), AND TWO OLD OIL LAMPS.

(*In Washington Museum.*)

stick with the dished base, which became common as the type of the chamber candlestick, came into being. With the progress made and the general acceptance of the two types, the pillar candlestick and the chamber candlestick, the artist in metal began to turn his attention to perfecting their forms and decorating them.

Many remarkable candlesticks in bronze are met with among ecclesiastical brasses, some of which are referred to in Chapter VII. Of the domestic candlesticks there are many early examples, some with beautifully twisted columns and later fluted examples. The pricket candlestick—that is, a candlestick with a spike on which a candle was firmly placed—eventually gave way to the more convenient socket, and a flange at the top of the column held any candle grease which might run down the sides of the candle. The pricket candlesticks of early twelfth-century make illustrated in Fig. 47 may be referred to as examples of the pricket form, their chief attractions being found in the richly enamelled decoration. In Fig. 48 we are able to illustrate a very interesting candelabrum now in the National Museum at Washington City. It is made up literally of two candlesticks attached to a very simple pillar bracket on which they slide up and down, the addition of a metal reflector suggesting later developments in candlesticks and lamps. In the later days both brass and silver candlesticks, especially the tall lights used on mantelpiece or on sideboard, were ornamented in keeping with the plate of the period, and were eventually classed among the more decorative appointments of the home.

When candles were made of tallow the wicks burned black and charred and a constant snuffing was necessary. This brought about the use of snuffers of polished steel and of brass, and a little later of snuffer trays, the snuffers and their accompanying trays forming a most interesting addition to the collection of metal. Candlesticks are still used, but the candles are of superior quality and burn steady and bright. Some are very decorative, too, especially the painted candlesticks which with their ornamental shades are attached to pianos, and are used as wall lights or as additional lights upon the table. The days of brass candlesticks, snuffers, and trays have, however, long been numbered, and most of these relics of old-world lights have passed into the region of curios. Here and there they may be seen in their once accustomed place, but more as ornament than for actual use. In a well-known hotel, at one time an old coaching house famous for its copper and brass wares, the candlesticks in those early days a necessity are now placed in pairs on the bedroom mantelpieces as mementoes of the past. They are not intended for use, for the electric switch is at hand, and the newer light has taken the place of the wax candle (see Fig. 49).

The lines which some years ago were printed in connection with a concert given in aid of the Glasgow Candlemakers and Tallow workers are appropriate :

"The light of other days is faded,
The reign of tallow's past ;
Magnesium and the limelight
Have vanquished 'dips' at last.

FIG. 49.—GROUP OF RARE CANDLESTICKS, ALMS-DISH, AND EWERS.

(In the Victoria and Albert Museum.)

And the old lamplighter, too,
Must shortly disappear,
Making way for electric light,
With its garish flash so 'queer.'"

Oil Lamps and Lanterns.

Much might be written of oil lamps and lanterns, of which there are many interesting curios. They are varied, too, for they cover a large field reaching from almost prehistoric times to the present day. Many lamps of metal and bronze have survived and are found in our museums side by side with the still earlier examples of terra-cotta and crude pottery. There is a very interesting collection of early lamps in the Guildhall Museum, one of the most attractive examples being a Roman lamp of bronze, a portion of the central oil space being covered. The bronze lamp illustrated in Fig. 50 which may be seen in the London Museum, is claimed by the authorities to be unique in London finds, and is probably the finest example of a Roman lamp discovered in England. The collector finds his most interesting examples in lamps which have been made in this country the outcome of the candle and of the candle lamp which was gradually evolved. Many of these early candle lamps were adaptations of old candlesticks; it would appear that the idea of enclosing a candle in a horn lantern and thereby securing greater steadiness on account of its being protected from the wind and draughts, which had already been adopted, suggested a glass cup or protection to the candle on the table. It is quite likely that the first experiments were made with a broken cup of porcelain with the bottom

knocked out, for the earliest examples seem to have taken that form, the cup-like vessels being gradually confined more and more at the top and the bottom. The idea of a candle-clock occurred to seventeenth-century candlestick makers, who marked the edges of the lamp on the framework so that as the candles burned low they marked the hours. The burning would be more or less irregular, but the marks on the candle-clocks would be some guide, and served their purpose in days when the time of day was of less moment than it is now.

Oil, which had early been the chief lighting medium, was once more in the ascendant when in the eighteenth century oil lamps gradually took the place of candles. Fig. 48 represents a handsome pair of old oil lamps, their beautifully shaped vase containers being reminiscent of the urns and vases at that time ornamenting the mahogany sideboard. It is said that many such lamps were made in England and sent over to America before the War of Independence, and that in the homesteads of the old plantations such relics have been treasured. The examples shown in the accompanying illustrations are now in the United States National Museum at Washington.

In the days when the watchman called the time of the night street-lighting was unknown. Lanterns were carried in the hand and the links-boys were in attendance.

In Fig 51 is shown a brass lantern (open and closed) which is now the property of the Sunderland Public Libraries and Art Gallery Committee, a very

FIG. 50.—EARLY BRONZE LAMP.

(*The London Museum, Stafford House.*)

interesting specimen of an eighteenth-century collapsible lantern of brass and horn. It measures 6¼ in. high and is 3⅜ in. square. Such lanterns were very common in the eighteenth century, and indeed in still more recent times in country places where they were very necessary before country roads were improved and rural thoroughfares lighted.

We must, however, fain pass over street-lighting for the lanterns which have been copied so many times in more recent days. *Apropos* of lanterns of copper carried by the wary traveller and of the copper lightning conductor on the church steeple, an indispensable feature still, the following lines are quoted:

"In the olden time, along the street,
A glimmering lantern led the feet
When on a midnight stroll;
But now we catch, when night is night,
A piece of lightning from the sky
And stick it on a pole."

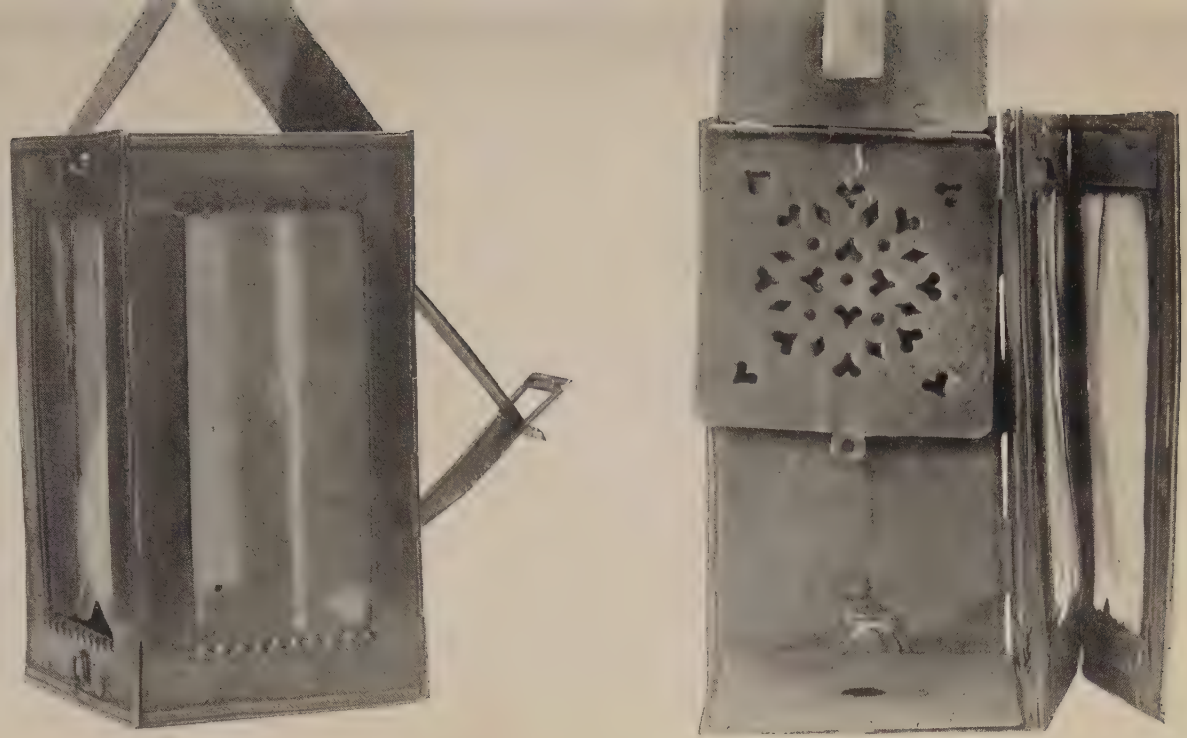


FIG. 51.—OLD BRASS LANTERN.

(*In the Sunderland Museum.*)

ELLS AND
ELL-METAL
ASTINGS

CHAPTER X

BELLS AND BELL-METAL CASTINGS

Founders' secrets—Great bells of historic fame—The uses of bells—Old mortars.

THE metal of which bells are made differs only from that used for other copper wares in its alloy. The ancients, however, made many mysteries about the constituents of the metal by which they were able to produce such beautiful notes and musical sounds. The modern bellfounder uses about 75 parts of copper and 25 parts of tin, varying it sometimes with a mixture of zinc and lead, and in that he differs little from the bellfounder of old, except that the older craftsman made a secret of his alloy and sometimes added a small quantity of other metals. The theory is that a large percentage of copper gives a deep tone, whereas the greater addition of zinc and tin gives a sharper ring.

The Founders' Secrets.

A knowledge of metals and of their qualities is a desirable accomplishment which all metal-workers and founders should possess, and it was doubtless

because some of the early bellfounders intuitively, or as the result of accidental experiment, discovered the true properties of the alloys they used that they were able to excel in the craft. There are secrets associated with the mixing of the metal, too, especially that of heating the molten metal to the correct temperature at the most critical moment of running it into the mould. Much depends also upon tuning the bells by turning and reducing their thicknesses at the right place in the bell's cone. The accuracy of such details is essential, otherwise those mellow sounds for which many of the old bells are noted would be absent. It is true that the rich mellowness and musical notes so noticeable in some peals are due to some extent to age, the exact influence of which is not fully understood. The bellfounder has always regarded his work from a lofty standard, and has recorded the accomplishment of any great work by the inscriptions he has caused to be cast upon the surface of the bell. Such data is often accompanied by the name and trademark of the founder, the Bellfounders' arms being frequently added. Sometimes such inscriptions are dated; at others the lettering is sufficient to denote the date of the work.

The making of great bells was always regarded as an event of some importance. Most of those which have obtained historic fame have either been associated with some public use or have been cast for ecclesiastical purposes. Such events were often attended by kings and queens and great ecclesiastics, who threw into the melting-pot contributions of silver and gold, inscriptions upon the bells them-

ves often recording the special object of their nufacture.

The difficulties in the way of casting bells a tance away from the tower where they were to be ng often induced the founders to cast them on the ot; indeed, as late as 1762 the clock bell of nterbury was recast in the Cathedral yard.

eat Bells of Historic Fame.

There are many great bells of historic fame, and hers which have gained notoriety from their great c. The claim to the possession of the largest bell s formerly made by the Chinese, but the palm is ually accorded to the Great Bell of Moscow, which easures 19 ft. in height and 64 ft. in circumrence. In our own country there are the Great ell of St. Paul's, weighing five tons; "Great Tom" Lincoln, of similar weight; "Peter" of York, eighing ten tons; and "Big Ben" of Westminster, aling fourteen tons.

Some old churches and cathedrals are noted more or their beautiful chimes than for the size and weight f their larger bells. At Mechlin there are forty-four ells in the carillon, and in Antwerp Cathedral the himes are played on sixty-five bells, the oldest in he set, named "Horrida," being dated 1316, but the ell which is said to be the best loved of all by the ingers is stamped "Carolas," having been given by Charles V.

There are bells of lesser size which have gained opularity, some from their former associations; thers, perhaps, more so because of their present

location or ownership. Sometimes bells have been removed from old churches and after having changed hands several times have found a resting-place in the possession of laymen; often in museums, it is true, but not always so: as an instance there is the fine old bell in the possession of the Grocers' Company, cast in 1463 for the Church of All Hallows, Staining, where it hung for many years. The bell illustrated in Fig. 52, now in the Victoria and Albert Museum, is of more recent date, having been cast in Exeter in 1670 by John Pennington.

Bells have frequently been brought to this country as trophies of war. At the Tower there are several fine examples of Eastern workmanship, and there are others now in the United Service Museum at Whitehall.

The Uses of Bells.

The older bells have seen varied service; they have been hung in church towers and in public places; they have sounded the note of alarm, and given the signal for historic assemblies; they have rung the death-knell of illustrious persons, and in rural England have summoned many generations of worshippers to Divine Service.

The bells, the loud clanging of which can be heard afar, are, however, the outcome of a gradual process of development. The evolution from the handbell to the turret bell was doubtless slow.

The simple handbell in its early stages was only a slight advance beyond the bells hung round the necks of the leaders of the flock, which were made by

e village smith. Such primitive, and not always usical, bells were used from the earliest times to mmon servants and workers in the field and nderers of the flock. The practice dates from blical days, for it was an early Eastern custom for eiks and patriarchs from their tent doors to mmon their followers, or give the danger signal, by eans of a bell.

Bible records tell of bells of gold suspended from e robes of priests, and of their use in temple orship. From that time onward they have been sociated with religious ceremonials. In later times e early Christians employed bells of copper and rass and consecrated them to their use. Thus usical peals, rung collectively or individually, have ounded for all kinds of sacred rites. The bell—a nere handbell—was soon fixed over a doorway, or n some convenient place where it could with greater ase be rung by a cord. Then came the suggestion f larger bells, afterwards covered over, and finally ung in steeple or tower, like the campanile (a tower separated from the church) so often met with in Italy.

The church bell is said to have been introduced here by Paulinus, the Bishop of Mona, in A.D. 400. The next record of importance is the historical account of the Venerable Bede, who describes bells hung in towers —that was in A.D. 670. Some two hundred years after Bede's days a peal was rung for the first time in England, in the Abbey of Crowland. The pioneers of bell-ringing upon bells tuned in harmony were the ringers who produced such charming results with the bells of King's College, Cambridge.

The bells of churches were rung for ecclesiastical and for national and parochial purposes. There was the vesper bell for evensong, and there was the curfew bell which rang in obedience to the "lights out" enactments of Norman days (see *Couvre de feu*, p. 113).

Of the minor uses of bells there are many. In Tudor days small bells were familiar objects in hunting. They formed part of the equipment of the hawk or falcon. Of these we read in Shakespeare's works—of the "'larum bell and of sweet bells jangled out of tune." In *Othello* there is a record of the "snorting citizen with his bell."

Bellmen were the heralds of news in country towns, and the importance of their office was made clear by the "Oyez! Oyez!" by which they prefixed their tale. The ancient watchman clanged his bell and the light in the lantern slung at his waist flickered as he sounded the call. This is mentioned in an old ballad, the first verse of which reads:

> "Time, master, calls your bellman to his task,
> To see your doors and windows are all fast."

Numerous examples of curious bells are to be seen in our museums. In the Welsh Museum at Cardiff there is an old Celtic bell from Llangwynodl, shown side by side with an electrotype of the famous bell of St. Patrick. There is rather a sad note in the story of the fate of the old division bell of the Irish House of Commons, which, when the Parliament was abolished, was sold for use in a Dublin theatre as a call bell, eventually to be resold as old metal.

FIG. 52.—BELL CAST BY JOHN PENNINGTON AT EXETER IN 1670.

FIG. 53.—GROUP OF BELL-METAL MORTARS.

(*In the British Museum.*)

hat curio would at this juncture have been regarded
s an historical relic of some value.

The restoration of bells sometimes leads to mis-
akes when it is found that the inscriptions upon them
ppear to indicate an older date than would be
dged to be correct from their appearance. Of such
estoration work an instance may be given of the
eal of twelve bells recently placed in the tower of
t. Mary's Church, which has become the cathedral
f the new diocese of Chelmsford. The bells were
ledicated in the presence of ringers from a large
number of towns and villages in Essex, a county
noted for its bell-towers and bells. The peal of ten
replaces one cast in 1777, and the old inscriptions
have been placed on the new bells. One reads :

> "Tho' much against us may be said,
> To speak for ourselves we are not afraid."

Perhaps one of the most pleasing thoughts associated with bells is that their earliest use has been perpetuated throughout the ages. The sheep bell hung round the neck of the bellwether in Eastern lands sounding so sweetly in the days of the Psalmist of old, finds its replica on the downlands of the Southern counties and on Salisbury Plain to-day, for there and in many other parts of rural England the tinkling jingle of the sheep bells may be heard.

Bells are not without their rivals, for gongs have been used in Eastern countries for years, and now they are popular elsewhere. They were originally a disc of beaten metal with upturned rim, although in some countries they took the place of drums in war-

fare, as well as playing a part in religious services. The circular gong is associated with China, Japan, and Java. The Burmese gong is of triangular form, and by way of contrast is made of polished metal, whereas those of the first-mentioned countries usually show hammer marks. Many of the old gongs were exceedingly musical, and when struck with a leather-covered wooden mallet were capable of producing a variety of sounds. Gongs old and new vary in size and, consequently, in depth of tone and volume of sound. Among the Eastern curios there are some highly decorative examples, especially among the smaller table gongs, the stands of which were often enriched by decorative ornament with inlays and enamels.

Old Mortars.

On account of being made of the same kind of alloy, bronze mortars are referred to in this chapter. They were usually cast by the bellfounders from the metal they used for bells, and many of them when struck give forth sonorous and deep-toned sounds. These mortars were moulded and often decorated with fanciful designs, frequently with the arms or initials of the prospective owners, others being dated. Those shown in Fig. 53 are representative types.

Many of the early mortars appear to have been imported into this country. The Dutch founders made many in the sixteenth and seventeenth centuries, some being especially handsome and of large size. Others still more ornate were of Italian, Portuguese, and Spanish origin.

In course of time the use of bell-metal was discarded, and brass mortars, cast and afterwards turned on a lathe, came into vogue. These gradually became little used, and when pestles and mortars were needed in the domestic kitchen, more modern types of marble and composition were introduced. To-day, these once necessary domestic appliances are relegated to the chimney-piece as honoured ornaments in the kitchen; the older and more valuable bell-metal mortars being given more prominent positions upon sideboard or cabinet. Such is the story of the bellfounders, whose art remains among modern crafts.

KI

CIVIC
EMBLEMS
AND
WEIGHTS
AND
MEASURES

CHAPTER XI

CIVIC EMBLEMS AND WEIGHTS AND MEASURES

The ancient horn—The badge of office—Weighing instruments—Measures in Exeter Museum—Our standards.

THE sounding of brass and the tinkling of cymbals have heralded in many State pageants. Civic pomp and splendour have been enriched by brilliant uniforms, and the sunlight has flashed on many a thrilling event in national history. In the relics of former glories we find emblems of the doings of the past, and amidst ruined buildings or those halls now shorn of much of their former grandeur—their original purpose forgotten, or, perchance, misunderstood—the collector seeks symbols of office and hoards them when found as mere curios.

In this chapter such civic emblems and prosaic weights and measures are grouped. A curious combination some may think. Very appropriate, however, when we note the close connection which once existed between those old corporations and guilds who rejoiced in emblems of office and enjoyed the custody of standards of weights and measures, fulfilling the duties which had been thrust upon them

by powers and authorities only too willing to depute to private bodies necessary work for which they had no equipment and no organization.

The Ancient Horn.

Civil authority and even State control could, in days gone by, only be sustained by plenty of pomp and show. The populace were awed by giant insignia and much parade of power to enforce the authority held. In days before there were newspapers to make announcements, and no printing presses to print posters and proclamations, the calling of a public meeting at which declarations could be made or decisions arrived at, was a matter of no small importance. The sounding horn had been used from primitive times to call together the people, and the gatherings of the folk mote were heralded in and assembled by a loud blast on the "moot horn." The moot or meeting of the people of a village or hamlet began in Anglo-Saxon times, when such assemblies were held in the open air. Later came the moot hall, which preceded the guildhall of days when traders and merchants were incorporated into fraternal guilds. The horn was the signal for calling such assemblies commonly in use in old towns, and such relics of the past are now preserved with care—emblems of altered times to those who are familiar with them. In Fig. 55 is shown the moot horn of Winchester, a beautiful example of ancient metal-work. There is a similar horn at Dover, which is sounded still according to custom at the election of the mayor.

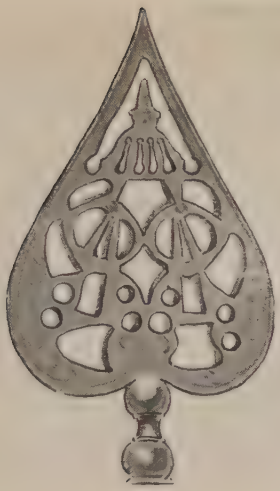


FIG. 54.—AN EIGHTEENTH-CENTURY FLAGSTAFF HEAD OF BRASS, ORIGINALLY GILT.

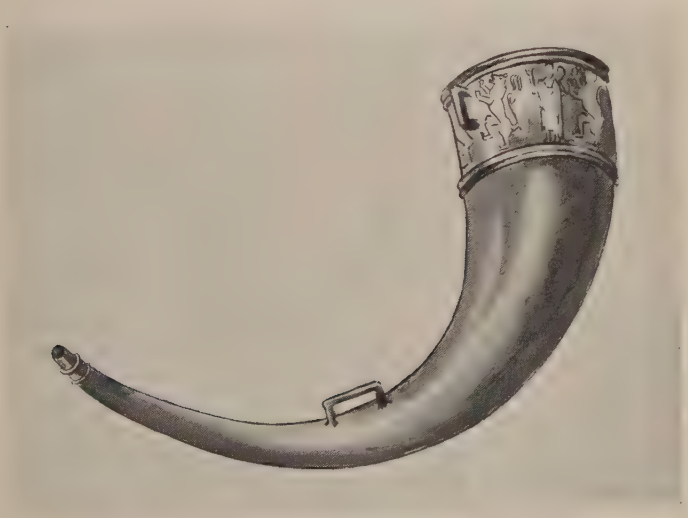


FIG. 55.—THE WINCHESTER MOOT HORN.

(*In the Guildhall Museum, Winchester.*)

The moot horn is not quite lost in modern procedure, for the heralds march in Royal processions and precede the proclamation of regal and civic state as of yore, on those rare occasions calling a halt from everyday occupations by the trumpet's blast.

The Badge of Office.

The mace is with us to-day as the chief emblem of office. Without it no civil gathering of importance in London would be complete, and when robbed of its presence no law can be enacted at Westminster. The "bauble" Cromwell caused to be removed was a symbol of historic and ancient fame, deep-rooted in the minds of even stern Puritans. It had to be banished ere the Parliament was dissolved!

The mace is truly the lineal and direct sign of power and authority, for it was the ancient battle-axe which could deal the deadly blow that was first held up before the sovereign, and in brass or gilt the tawdry symbol took its place and has ever since retained its significance.

In lesser degree the staff or stave of office has remained an ensign of authority. The heads of such staves are often decorative and surmounted by some appropriate emblem or well-known sign of office.

The flagstaff head shown in Fig. 54 is of eighteenth-century date; its very beautiful openwork ornament was probably of gilt. It is an excellent example of English workmanship of that period.

Weighing Instruments.

The Founders' Company exercised an oversight over weighing instruments and weights and had difficulties to contend with, for there were many irregularities and not a few differences in the standards used in various localities. The scales of traders of olden time were far from accurate, and there was abundant need of standard weights and measures such as were kept in some of the old country towns. Winchester and Exeter are two places where care has been taken of the old standards, and in both of these towns ancient standards may be seen. Similar standards formerly kept in other towns have been scattered, and not infrequently old specimens—obviously standards from the inscriptions upon them—are met with in private collections.

Those now in the Winchester Museum extend over a considerable period, ranging in antiquity from the reign of Henry III to Elizabeth. The original bushel which became the standard on which other measures were based is still preserved in Winchester. In the reign of Henry VII, one William Nele was commissioned to make further copies, on which the sum of fifty pounds was expended. The transaction was recorded in the State papers of 1486 as follows: "To William Nele, gunn founder and brasier of London, upon makyng of diverse measures and weights accordinge to the olde Standarde of Englande, to be sent into several shires and cities of Englande, accordinge to the King's commandment, and by the advice of the Counsaal at diverse

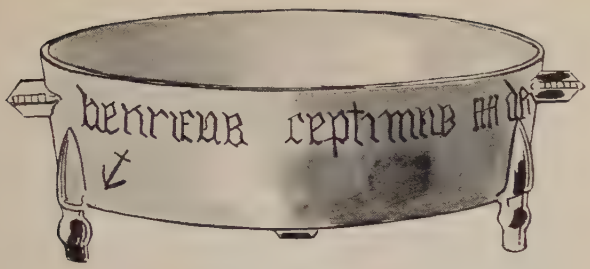


FIG. 56.—THE WINCHESTER BUSHEL (STANDARD MEASURE).

FIG. 57.—OLD MEASURES BASED ON THE WINCHESTER STANDARD.

(*Sketched by the permission of the Corporation of the City of Winchester.*)

tymes." The ancient bronze bushel of great historic interest is illustrated in Fig. 56. Among the other standards kept with the "bushel" in the Winchester Museum are those shown in Fig. 57—all measures based on similar standards. Tudor examples are also still in the possession of the local authorities at Norwich, Salisbury, Northampton, Southampton, and Exeter. Fig. 58 is another example of a pint measure, dated 1601, the crowned initials "E.R." upon it, of course, indicating "ELIZABETH REGINA." A later Winchester pint, dated 1704, is shown in Fig. 59.

Measures in Exeter Museum.

When it was enacted in the reign of Henry VII that certain towns should hold copies of the ancient standards, Exeter was the city chosen wherein were deposited the standards for the Shire of Devon. They are now on view in the Royal Albert Memorial Museum in Exeter, supplemented by other standards legalized by Queen Elizabeth, and by more recent copies of authorized standards. There are five standards, dated 1799, consisting of the Winchester bushel, peck, and half-peck, and standard coal measure of peck and half-peck. A bronze standard of the time of William and Mary is engraved "FOR THE CITTY AND COVNTY OF EXON 1689;" and a standard gallon, embossed with crown and monogram, is engraved "E.R. ELIZABETH REGINA, 1601;". There are also standard wine measures; one engraved on one side "CITY OF EXETER 1797" and on the reverse "HALF PINT. WINE," and another on the

reverse, "GILL. WINE." An exceptionally interesting piece is a standard ale gallon of the time of the Commonwealth, engraved "AN ALE GALLON SIZED AND SEALED IN THE TOWER OF LONDON BY ME JOHN REYNOLDS OF THE MYNT. ANO. 1653." Among the standard weights included in this interesting exhibit is a 14 lb. bronze weight of the time of Henry VII, embossed with portcullis and rose, and engraved "HENRIC SEPTIM." It was found some years ago among old metal at a store in Exeter, the manner of its discovery indicating the possibility of further finds of a similar nature in other towns. The little Troy weights are exceptionally well preserved; the weights according to their engraving are 32 oz., 64 oz., 128 oz., and 256 oz. On the largest specimen the legend runs: "ANO . DO . EL . REG . XXX . 1588 ." and on the upper edge, "CCLVI .", the smaller weights being similarly indicated. These were all used as the standards at Exeter until the year 1824. Another interesting specimen is the standard yard and ell bed used in Exeter for testing the rods used as cloth measures, the groove on the standard on the engraved side being one yard, that on the reverse one ell (= 45 inches). The inscription on the standard yard reads: "CIVITAS EXON CHRISTOPHER COKE ESQ . MAYOR . WILLIAM BOLITHO RECEIVER 1693." In the same museum there are also six brass stamping blocks formerly in use at the Exeter Custom House in connection with old Exeter trades.

Mediæval London yields the collector many choice pieces. Beautiful little scale beams of bronze

and brass have been found in or near London Wall. Scales of antiquity, too, have sometimes been in the possession of old families for centuries almost without their knowing or appreciating their value. Not long ago some beautiful little scales made of brass, which must have been made more than two hundred years ago, were picked up on an old barrow where the man who bought "odd things" had it for sale, and thought it to be one of the almost valueless curios in the remains of sundries he had bought from the caretaker of an empty house. In the Guildhall Museum there are scales and weights of types usual in the fifteenth, sixteenth, and seventeenth centuries. One of these is decorated with a band of stars, another of triangular shape is stamped with a merchant's mark—that also was found on the site of London Wall. Another remarkably interesting curio is an octagonal weight evidently answering the purpose of a baker's weight, and perhaps as an advertisement, too, for it is engraved, "WEIGHT OF A QUARTERN LOAF, SOLD BY JAMES BULL, 124, LEADENHALL STREET."

Our Standards.

In this connection it may be pointed out that a very pleasing collection can inexpensively be made out of old money changers' weights, both English and foreign. They were chiefly used with the pocket scales at one time carried about by traders as a precaution against the numerous clipped and light-weight coins in circulation. Among these little weights are those which were used for testing

what are now obsolete gold coins, such as angel, guinea, half-guinea, and seven-shilling piece.

Some of the old Roman bell weights are interesting; they took their shape from more ancient weights in the form of a pagan deity, probably Mercury, who was looked upon as a god of scales and weights. In some collections larger Continental weights are met with; those illustrated in Fig. 60 representing three French weights preserved in the British Museum.

When examining old weights and measures we often wonder at the origin of such curious tables of weight formulated on somewhat perplexing standards, ridiculed as long obsolete by supporters of the metric systems. They would sweep them away; but to do so would snap one more link with the historic past, and perhaps cause us to forget the very simple origin of so many of our so-called complicated systems, the outcome of a slowly developing commerce—very different now to the days when our standards were formulated. The baseline of our weights and measures is to be found in a single grain of corn, such as would seem to be Nature's gift—the staff of life! It was a natural standard for agriculturists, who would be the first to use it, to adopt. Not only was the grain of corn the standard of measurement and weight, but a given number gave the weight value to the penny sterling. The grain retained its prominent position in our calculations long after standards had been fixed, for in the reign of Henry VII it was enacted that the bushel measure should contain eight gallons of

FIG. 58.—A PINT MEASURE OF THE REIGN OF ELIZABETH.

FIG. 59.—A WINCHESTER PINT OF THE DAYS OF QUEEN ANNE.

FIG. 60.—OLD FRENCH WEIGHTS.

(*In the British Museum.*)

wheat, and that the gallon should weigh eight pounds, the pound to be of twelve ounces Troy, each ounce equal to twenty silver pennies, every one of which should be of weight equivalent to thirty-two grains of dry wheat.

It will be remembered that a still earlier standard —that of the Roman Empire—was based on barley-corns, of which there were twenty-four to the ounce, a measurement adopted at Troyes, in France, having been brought from Cairo during the Crusades. Thus in this simple story we see the origin of Troy weight which in after years was used concurrently with the later *avoirdupois* (goods by weight), the standard adopted for heavy wares.

XII

BRONZES AND THEIR REPLICAS

CHAPTER XII

BRONZES AND THEIR REPLICAS

Early figure modelling—Statues in public places—Replicas in miniature.

THE art of sculpture was practised by the ancients, and long before the beautiful bronzes for which the artists of Greece and Rome were famous carvers of wood, and sculptors of stone and marble, had cut, inscribed, and fashioned human figures, animals, and fabulous creatures according to their whims and fancies. In moulds cut in stone the early casters in metal produced the objects which we roughly class as bronze, and they are preserved to-day as reminders of those who lived before history was written. When the early Bronze Age had passed away and the use of iron was understood, the art of sculpture in stone was practised by the Egyptians and by other Eastern nations. Then came the beautiful metal-work of Ancient Greece; the statues, trophies, and groups, produced in those days when Greece excelled in the fine arts, have acquired a fame which has never been exceeded by sculptors or workers in metals in modern days. The Italians of a later period showed their

religious emotions in the metallic works of art they produced in early mediæval days; and still later French modellers have excelled in human expression.

Many of the great works of the old masters in bronze are unique, and they are retained as great treasures in the national museums where they have found lasting homes. For the benefit of connoisseurs of art many of the great works have been copied, and in the Victoria and Albert Museum at South Kensington and in other places there are replicas in metal and in other materials, faithful copies of the original bronzes which are so rare. The educational value of a gallery of ancient art, whether expressed in marble, bronze, stone, or other materials, is considerable; it not only tends to the appreciation of modern art as represented by the statues and monuments in our parks and gardens, and in those smaller works which adorn public buildings and private mansions, but it leads to the appreciation of the lesser replicas of great works, such as artistic groups, figures, and bronzes which have been copied in miniature. Many of the most important works of the modeller and caster of bronze groups and figures are familiar to students of art and collectors of curios, in that so many of these important studies have been reproduced or copied; sometimes the copies are equally as beautiful as the original, although on a smaller scale, and many of them have quite an antique appearance, for they are by no means modern, such works of art having been reproduced very many years ago.

FIG. 61.—BRONZE TIGER, BY ANTOINE LOUIS BARYE.

Early Figure Modelling.

The human figure in its most perfectly known form was early made the model from which artists sculptured stone and moulded figures. Even some of the crude attempts of native races have evidently been intended to represent human beings with whom they associated or races they held in fear, but they were not always successful. Bronze statues cast in moulds were known in Egypt, and throughout later periods most of the civilized races have employed methods by which they have been able with more or less accuracy to reproduce in other substances of a more lasting character the perishable flesh and blood of the human race. In a similar way the personified deities have been perpetuated in bronze and many of them are simply idolized humanity. Sometimes these statues have been very large, far beyond what is generally known as life-size. It must be remembered, however, that many of these colossal statues when raised to a great height are by no means out of proportion to the buildings on which they were placed, and assumed a normal size when viewed from below. It is said that one of the most striking colossal figures was that of Minerva, crowning the summit of the Acropolis. The largest statue seems to be that of Nero, which rose 150 ft. In more modern times statues have been brought down to normal size. Visitors to Rome, however, recognise what a wonderful achievement it must have been to place that immense statue of St. Peter in position. The artists of old were indeed clever, and not only have they justly been accorded fame for the size and beautiful propor-

tions of their statues, but many of the ancient bronzes have gained their greatest notoriety from the great beauty with which the sculptors must have idealized their models. Many of the antiques are almost perfect in form, and we are forced to wonder what kind of men and women their models were.

Classic Models.

The classic bronzes were almost invariably conceptions drawn from imagination, but the beautiful forms of the athletes and Greek maidens helped the artist in his estimate of the deities he personified. In those bronzes we see the magic touch of the master hand, and perhaps of the belief in the mystic attributes so cleverly designed. Thus we have figures of Hercules, Mars, Venus, and many others, which can be copied, and now and then by some stroke of good luck a genuine antique is added to the collector's museum.

Statues in Public Places.

During the last half-century simple statues erected to the memories of noted politicians and military men in public parks, streets, and open places, have been added to by more realistic groups. It would be beyond the scope of this work to attempt categorical descriptions of such bronzes to be seen in the public places of our great cities, and it would be still more difficult to rightly classify them either in their order of merit or of the appropriateness of their selection. It seems justly fit that those who have been associated with the metallic art should be com-

FIG. 62.—BRONZE LION, BY BARYE.

nemorated in copper and brass. To Pittsburg belongs the honour of having remembered the father of the art of hammering into shape the metals. In that city, on a massive pedestal, stands a colossal bronze figure of Tubal Cain, who, in his brief life's history given in Genesis, is spoken of as an "artificer in brass." He fittingly heads the list of metallurgists and scientists, to many of whom monuments have been erected.

The use of bronze in monuments is not confined to figures of great men, for bronze and brass ornament often adds to the magnificence of a national memorial. As examples of the use of bronze for that purpose mention may be made of the bronze lions, after Landseer, at the four corners of Nelson's Column in Trafalgar Square. The use of bronze, as adding to the adornment or appearance of an antiquity in stone, is exemplified in the two bronze sphinxes at the base of Cleopatra's Needle on the Thames Embankment.

The bronzes of comparatively modern days are mostly the work of the founder, cast after the sculptor has done his work. Some of the early examples of Etruscan and Egyptian art consisted of bronze or brass hammered into form by hand, or made of plates riveted together. Others appear to have been beaten or embossed into high relief in a mould. Some of the cleverest castings of bronze, however, are found in the work of Eastern nations, the best examples being idols and temple ornaments (see Chapter XIV).

Replicas in Miniature.

The so-called miniatures range from important

reproductions for household and gallery ornament to the quite miniature bronzes which adorn the mantelpiece or cabinet. Many of the statues and groups of ancient and modern forms have been copied. There is, however, another school of art which to many is very attractive. Just as pictures of animal life are appreciated by many, so the sculptures and bronzes of well-known animal artists have been justly appreciated. In France there are the works of Antoine Louis Barye, who was born in Paris in 1795. It is said that Barye discovered his real bent from watching the wild beasts in the Jardin des Plantes. Some of his great works were exhibited early in the nineteenth century, and his beautiful models have been much copied. Three of the most popular are shown in Figs. 61, 62, and 63. There is the tiger which he exhibited in 1830, and the lion and the beautifully formed stag. Such works of art are worthy of a place in any collection of metal, for they represent an important French school. Of men who have made names for themselves there are many whose statues are found in private collections. A very favourite one is that of Robert Burns, whose colossal statue was erected at Ayr on the occasion of the one hundred and fiftieth anniversary of the poet's birth. Burns is reported to have said on his deathbed: "They'll think mair o' me a hundred years after I am dead," a truism none will deny.

FIG. 63.—BRONZE STAG, BY BARYE.

XIII

ORIENTAL BRONZES AND BRASSES

CHAPTER XIII

ORIENTAL BRONZES AND BRASSES

Countries of origin—How some Oriental curios are derived—A wealth of metal on view—Various Indian wares—Chinese and Japanese art.

UNDER the somewhat generic term "Oriental" we class those numerous bronzes and other art treasures which come to us from the East and the Far East. Early in the mediæval days Eastern influence dominated the craftsmen of Europe, and many of those who took part in the Crusades, and later in adventurous journeys into the northern part of Africa, bordering upon the Great Sea, brought back to their Western homes curios which were undoubtedly Oriental in their design.

Countries of Origin.

A collection of copper and brass to be at all representative must be varied and cosmopolitan in selection. Such a collection should include vessels of utility and ornamental objects which show the aims of the artist who designed them. Incidentally, too, such objects exhibit the sameness of purpose

existing in many lands; although the methods of domestic procedure and the ways of living vary until their common origin is scarcely recognizable. In such a collection of domestic curios the influence of Saracenic art is seen in the ewers and basins and similar vessels which come from the lands where the wild Arab tribes lived for centuries in an almost barbarous state on the edge of the Syrian desert. Many of these quaint hammered copper vessels are of barbaric beauty, such as, for instance, the coffee-pot shown in Fig. 64 and the basin in Fig. 65.

There are some pleasing customs savouring of patriarchal days still practised by Arab races. Such, for instance, when the sheik has finished his morning meal he throws a stone into his brass or copper coffee-pot as a sign to his followers to strike camp.

> "Awake, for morning, in the bowl of night,
> Has flung the stone which puts the stars to flight,
> And, ho! the hunter of the East has caught the Sultan's turritt
> in a noose of light."

The Arab metal-work is generally covered over with characteristic designs and distinctive styles. Equally characteristic is the finely engraved ornament on many small brass objects made by Arab craftsmen. This is exemplified in the small and beautifully engraved brass writing boxes which were once a feature among the educated scribes of Arab fame. One such case is to be seen in the British Museum, the work of Mahmud, son of Souker, of Bagdad, made in 1281. The style is said by ex-

FIG. 64.—COFFEE-POT OF HAMMERED COPPER FROM SYRIA.

perts to combine the art motives of Mesapotamia and Egypt, which in the thirteenth century very naturally met in Syria. Another distinctive style is noticeable in the art of the metal-workers of the Mameluke dynasty of Egypt; their arabesques showed more realistic foliage than the Arab decorations of an earlier date.

Antiquaries always turn quite naturally to Egypt, that land with such a great past, when seeking for inspiration from the great monuments which are masterpieces of art—in bronze and stone. These they find there it is true, but the more important pieces of metal-work of that early period are found in Assyria, from whence came ponderous gates of brass, covered with the remains of delicate tracery and inscriptions. Such works of ancient art are rightly given places of prominence in our museums; the private collector, however, is generally content with the lesser bronze antiquities of Egypt which he can *collect.* These include mirrors and many small articles for the toilet and some delightful domestic bronzes. Among them are charming little ewers with long projecting spouts and curiously wrought curved handles ornamented with masks and shells.

The curios which reach us from Cairo are mostly in strict accordance with Egyptian characteristics. The earlier examples are representative of the art of Northern Egypt as it was expressed by the metal-workers between the thirteenth and eighteenth centuries, throughout which there does not appear to have been any great divergence of style, although when objects known to have been made during the earlier

part of that period, and others fashioned during the later, the progress and development, although it had been slow, is very noticeable. There are also some traces of outside influences. In Fig. 10 there is an early lamp of brass in the form of a bird, inlaid with copper, an example placed in the thirteenth century. Quite different is the late example (eighteenth century) given in Fig. 64, which is a coffee-pot with a bucket handle and another small handle at the back; the spout is roughly worked with corrugations and quatrefoils, on the five bosses being the marks adopted by the owner of the shop in Cairo where it was used.

Reference has already been made to the influence of Saracenic art upon metal-workers in places where the Saracens came in contact with the craftsmen. As indicative of this feature the fine large brass basin illustrated in Fig. 65 is shown. Some portions of the bowl have evidently been filled in with silver. There are other objects such as bowls, dishes, and ewers showing similar decorations, many of which may be seen along with this example in the Victoria and Albert Museum.

The Saracens seem to have had some influence upon what are usually regarded as European articles; thus in a collection of old bronze mortars there are sometimes examples from countries in the South of Europe which show in their designs these characteristics. The mortar had, of course, a very general use, and was needed everywhere in days when so many compounds were prepared by hand labour.

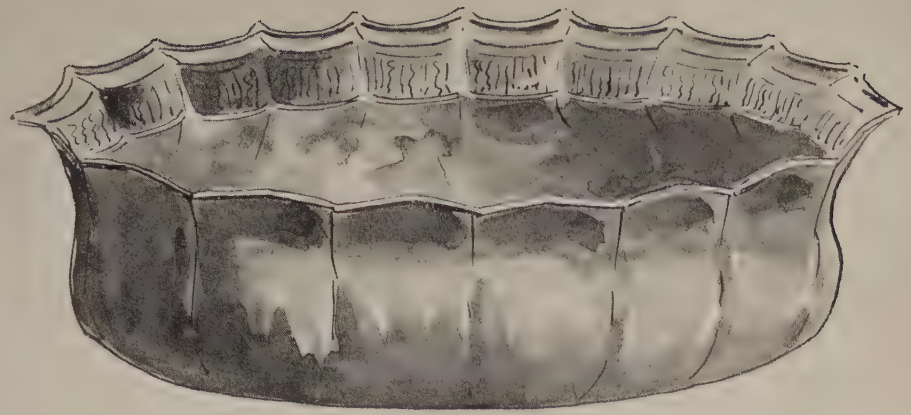


FIG. 65.—SARACENIC DECORATED BRASS BASIN.

(*In the Victoria and Albert Museum.*)

Persian art is peculiarly specialistic in its treatment. The designs used by the metal-workers in that country from quite early days were emblematic and of an all-over conventional type, often interwoven with scenes. Even many of the common vessels, like bowls and covers and saucers of brass, are cleverly chased with hunting scenes and floral attributes, many of the cups being covered with arabesque ornament.

Some of the brass egg-shaped hooker bases are chased in relief; the mounts of the rose-water ewers—which are often of china, with metal linings for holding ice—are frequently decorative. In many instances the vessels are ornamented with coloured inlays, giving them peculiar colour effects. Damascus —always an important seat of metal-work—has supplied collectors from many countries with the beautifully incised ornament produced by filling in the cut spaces with fine gold or silver wire beaten into the brass and then polished. So important has this mode of giving relief become that damascened metal stands alone as an art, seen at its best in the wonderful armour of the later period, when the utility of plate armour was giving way to the ornament which embellished the State armour—the "dress suits" of the regimentals of the Stuart days.

How some Oriental Curios are Derived.

It is useful at times to consider how the curios we collect have gradually accumulated, and thus to ascertain how they have been secured in the

past ; and from that we are enabled to form some estimate of further supplies, for the law of supply and demand regulates to some extent the market value of curios ; it has something to do with the direction taken by curio-hunters.

Many curios have come into this country as the result of war and loot. Wars in the Far East have served the collector, and many choice bits of metal-work have changed hands at nominal sums after the return of troops employed in minor wars and punitive expeditions. Our vast Indian Empire, however, supplies many beautiful objects in metal, both ancient and of comparatively recent days, but even those are so quaint and so unlike the common objects of British make with which we are familiar that they are welcomed and find a fitting place among antique copper and brass.

To understand the curios which may be bought in Eastern bazaars, and more conveniently in the numerous stores and shops where Indian curios are sold, it is well to become acquainted with a really good representative collection, such as that which may be examined in the Indian Museum at South Kensington. In several galleries, arranged in cases according to the districts from which the specimens have been gathered, are to be found metal-work ranging from the sixteenth century to the present day. Although some of these are exceptional pieces, by far the larger number are helpful to the collector of even modest means in that they represent Indian curios which may be collected at trifling cost. Such objects, however, are unfortunately too often inter-

mixed with modern castings and copies offered unblushingly by the dealer to the unwary. Among such curios from Indian bazaars, purchased by travellers to the less frequented districts, are very many cooking utensils. Some of these, although not very old, are quaint and unlike modern European vessels, for the native cooks have been slow to accept any change in their methods of cooking and do not take kindly to the use of Western types of culinary appliances. The Indian cook clings tenaciously to copper vessels, and notwithstanding attempts to introduce vessels of tin, aluminium, and enamelled ware, the old "chattie" is again and again brought out in preference. Most of the vessels are of primitive types, but they serve the purpose and the material is good and lasting. The native workers understand the requirements of Indian men and women, and can shape and hammer together just what they have for generations regarded as "the best." Clever indeed have been the native braziers in the past—and they still are—for they possess in addition to knowledge of coppersmithing an excellent knowledge of the composition and working qualities of the materials they employ. They understand something of the chemistry of metals, and are careful when melting copper in the furnace or over the fire not to overheat it, or to allow the metal to perish in processes of manufacture.

A Wealth of Metal on View.

The collection of Asiatic metal-work where speci-

mens from different countries, made at various periods, can be compared is, *par excellence*, that in the Indian Museum (the best examples of richly wrought damascened armour and arms are found in the Wallace Collection and at the Tower). The visitor on entering is at once absorbed in admiring Indian curiosities, especially the products of native craftsmen. In the vestibule are many remarkable exhibits, the work of Nepal metal-workers. Most of them were gifts to King George and Queen Mary when they visited India on the occasion of the great Coronation Durbar at Delhi. Some of the larger pieces were the gift of the Maharajah and Prime Minister of Nepal. Very wonderful is their workmanship, especially that of the brass groups so true to life. One of these represents a hunting elephant, fully equipped, with attendants; others, too, are associated with sports and hunting scenes. There are emblems of demons and the evil spirits which are so fully believed in by native dwellers on the borders of the forest.

Temple vessels are abundant, and among them are monsters and other fabulous creatures, and numbers of masks, notably those representing the fierce Dragpo fiend Tamdin (see Chapter XIV). There are some fine temple sets, and two magnificent conventional lions (temple guardians). There is also a very interesting brass group of natives occupied in various ways, one, for instance, carrying a package on his shoulder illustrating the method of relieving the weight of the bundle by a forehead strap, by which means natives are enabled to sustain the strain.

FIG. 66.—JAPANESE KETTLE (*YUWAKASHI*).

FIG. 67.—PAIR OF VASES OF RED-BROWN COPPER, RELIEVED WITH BLACK LAC, FROM MORADABAD.

(*In the author's collection.*)

So intricate are many of these cleverly modelled groups that it is not always easy to understand how they have been cast. Especially remarkable is the founding of the figure groups produced by the natives of the Patan district of Nepal. In most cases they accomplished their task by the *circe perdu* process (see Glossary), which enables them to cast even the most delicate groups.

Some very interesting wares in metal are obtained from Moradabad; they are smooth and beautifully finished, made of brass, and partly tinned. The more decorative pieces are of the early nineteenth century, and include such objects as plates, water-jars, tumblers, and sugar-pots and covers. From Lucknow some fine trays are secured; and many beautiful brass ewers, bowls, and basins have been obtained from Haidarabad, where not only comparatively modern but early eighteenth-century brasswork is to be found. Some of these have a pleasing effect when polished, the design or pattern upon them being inlaid with copper on a brass foundation and then polished.

Various Indian Wares.

There is an Indian ware known as *bidri*, beautifully damascened in gold on a brass and copper base, chiefly made in the villages round Lucknow and Deccan from the seventeenth century onwards. The peculiarity of these objects is that they are distinctly black and white, the metal consisting of an alloy of zinc, copper, and lead afterwards damascened with silver which is finally blackened

by pickling. A favourite curio is a Betel-nut box and cover; there are also spice boxes and objects intended for the base of a water-pipe. Many of the choice curios from Kashmir in Northern India are mostly of a dark red-brown copper, and are frequently incised and inlaid with lac. Among them are domestic vessels, the most commonly met with being the coffee-pot (*Kafijosh*). In one famous collection there is a curious boat-shaped alms-bowl of copper, chased with a running ornament, a design frequently employed in the eighteenth century. There are some interesting Mogul brasses, among which are washhand basins. In these, too, the decorations are frequently filled in with black lac. Very different are the brass and copper objects from the Punjab. Some of pure copper are inlaid with black lac, others are of copper-gilt, looking in the sunlight like burnished gold. Some are of brass; among the older objects of special interest being charcoal burners of fine brass with dome-shaped covers. From the Punjab come copper toilet boxes, which are usually fitted with locks terminating in the form of a conventional lotus. One of the most curious treasures in the Indian Museum secured from that district is a "black" cup, made of a metal composed of quicksilver and copper, a metallic compound supposed to give a digestive virtue to any liquid drank out of it.

The variety of metal objects from Nepal is considerable. There are articles of home decoration and usefulness, including charming toilet sundries. Among the lamps are many weird forms, a favourite

being a lamp designed like a peacock's tail supported by a lion. There are inkpots of symbolical forms with figures of Ganasa, the Hindoo god of wisdom. There are also many decorative water-bottles and vases and beautifully formed tazzas; as well as charming toilet boxes with raised diaper ornament and conventional patterns.

From Madras come bowls and water-bottles and many delightful trinket boxes, some shaped like fishes, others of bird-like forms. Some of these were intended for use as receptacles for antimony salve, which is so much used in India for the eyes. Among the more modern curios made during the latter half of the nineteenth century are spun and turned brasswork, especially vases and bowls. Travancore is also famous for its artists in metal, and especially for their beautiful decorative brass pots with curious spouts and drinking cups.

The little bullock bells are characteristic of many parts of India, some being prettily ornamented and of sweet tinkling sounds. From Southern India there are Betel-nut cutters of unusual forms, and quite a variety of metal bowls, some being shaped like a pumpkin. From the same district come highly decorative copper plaques and brass salvers as well as water vessels.

The lamps from India are of equal interest to those met with among the antiquities of similar types from other countries. Those of more recent date, the work of baptized natives, have for the chief ornament emblems of the Christian religion instead of those associated with idol worship; although in

some instances the cross is flanked on either side with the sun and moon, reminding us of the more ancient pagan religions.

Many parts of India are noted for beautiful inlaid lac, much of which is extremely decorative; the vases illustrated in Fig. 67 came from Moradabad; they are of red-brown copper relieved with black lac. Haidarabad is also noted for such wares, in some instances red as well as black lac being used in the decorations, which are chiefly of conventional form.

The brasswork of Benares is well known, and it is still one of the most important features in present-day Oriental bazaars and shops. The modern work, however, rarely comes up to the old, for in olden time great care was taken in producing varied forms and correct ornament in decoration, the chief features of the Benares brasswork being the series of ten incarnations of Vishnu, represented so often on trays, bowls, and smaller vessels, such, for instance, as spice boxes and perfume holders, and receptacles for pulverized sandal-wood.

The native princes of India have always been accustomed to State ceremonial, and among the curious objects from that country are symbols of office, some of the maces being beautifully damascened with gold. The ceremonial and State swords formerly carried by the princes are museum curios of value, especially those around which the memories of historical events cluster, such as the gauntlet-sword of brass, the hilt in the form of a tiger's head, which formerly belonged to Ruggoneth Sookul, who

ved Captain Gordon's life during the Indian Mutiny in 1857.

As it has been suggested wars with Oriental potentates and the annexation of lands which had previously been under British protection have from time to time enriched national as well as private collections. Many of the trophies of war are unique and do not exist in duplicate. In the Indian Museum there are many such objects, notably the one-time regalia of the Kings of Burma; at South Kensington, too, there is a massive bowl of brass on which is engraved in picture characters the story of the history of China as related by Confucius, and transcribed by his pupil Tso, five hundred years before the Christian era.

Lamaistic temple curios are referred to in another chapter. These, however, do not exhaust the metal-work from Thibet. Indeed, many of the minor objects, especially those of a domestic character, are very pleasing. The vessels used in making tea in Thibet differ from those in China—the home of tea-drinking—in that the process of preparing "the cup that cheers but not inebriates" is different. The ladies of Thibet take the tea-leaves and grind them dry until they are of the consistency of a fine powder, using a brass mortar for the purpose. They then put the powdered tea into a kettle, and allow it to boil for about five minutes. The liquid is afterwards poured through a strainer into a tea-urn, and a little butter and barley flour are added. This compound, after being vigorously churned up, is poured from the urn of wrought copper into teapots, where

it is allowed to settle before it is served up in small brass bowls. Ladles are used for the purpose of taking the tea from the urn, for it has no tap, being simply a two-handled jar with a cover.

Some interesting curios are derived from Ceylon, especially those utensils made by the Sinhalese, who, it will be remembered, emigrated there from Bengal in the sixth century. The chief copper-workers in the island are the Veddahs, an aboriginal tribe of the interior closely allied to the Sinhalese. Their work includes copper and brass on which is very beautiful repoussé decoration. Buddhist influence has always been strong in Ceylon, and it is conspicuous in much of the decoration of the more important metal-work.

Ceylon casters have turned out some fine bells and many heavy bronze lamps. The lesser objects, which are varied, include brass boxes in which the lime for Betel chewing was kept. Some of these are circular, and others are pear-shaped, many being incised and inlaid with the more precious metals. Betel-nut cutters, similar to those from other parts of India, are among the collectable curios, those from Ceylon being especially interesting, for they frequently take the form of animals or of winged flying females. The objects enumerated do not by any means exhaust the metal curios from India and Ceylon, but they are among the chief features observable in a large collection, in the gathering together of which many small trinkets and perhaps unique sundries will be secured.

hinese and Japanese Art.

To many the curios from China and Japan are ore familiar than those from India and British siatic possessions. The pottery and porcelain of hina have long been used in this country, and uring recent years other objects of a curious and ntiquarian nature have been imported in large uantities from both these ancient countries. In hops and bazaars the metallic wares of China and apan have been much popularized too. That hina has a great past and possessed a civilization undreds of years before similar conditions apper- ained in Europe is well known. Collectors of the ntique go back in their search after specimens of ronze and other metals to those produced by the rtists of China in the Han Dynasty, which dates rom B.C. 216. In records of that period, concurrent with accounts of pottery, there are well authenticated details of the metal cooking vessels then in common use. There were utilitarian bronzes and many beautiful vases, some of almost the same designs as the concurrent pottery. There were cooking utensils not at all unlike the mediæval bronze pots of modern Europe; their handles, however, were more decorative, often taking the form of a dragon's head. The feet of these ancient cooking-pots were often like lions' claws or eagles' talons. Among other relics of that period are quadrangular wine jars, some of the rarer types being decorated with fishes, in the drawing of which the Chinese artists of the Han Dynasty were very clever. They used such decorations appropriately, too

for this was the ornament they chose on fish kettles.

A peculiarity of the metal-work of the Han period was the dark red copper which seems to have been used concurrently with bronze. When we note that some of the pottery was beautifully formed we can quite understand that the bronzes were equally well shaped, for the metal-workers would not be behind the potters in their craftmanship. Some of the rarer bronze tazzas are also well shaped and have been carefully moulded.

The chief curios coming into the hands of collectors are of a somewhat later date than the Han Dynasty; but China moves on slowly, and there does not appear to have been much advance or change for many centuries. The metal-work made during what we term mediæval days in Europe was often copied from familiar objects made of other materials. There is a bronze vase made in the Sung Dynasty, fashioned in imitation of an old jar tied up with rope, the ring handles being technically described as "conventional heads applique"; this vessel measures 14¼ in. diameter at the shoulder and stands 9½ in. high. It is difficult to trace where such pieces come from; it is, however, well known that many have been looted from the temples; others, probably imitating older examples, are mainly of nineteenth-century workmanship.

The metal-work which comes from Japan has reached us in great variety. There has been no need for the traveller or collector to search the island for curios to bring over to this country, for the commercial instincts of a new race of Japanese merchants have

FIG. 68.—BRONZE FIGURE (ONE OF A PAIR) INLAID WITH SILVER AND GOLD.

(*In the author's collection.*)

poured out a wealth of antiques, collected from the native villages; with these and modern imitations they have gladly supplied the demand of the Western world. In this way attention has been called to the products of that country where craftsmen have gone on hammering copper and brass, and inlaying the metal in highly decorated patterns in silver and gold for so many years.

Reference has already been made to the rare temple pieces and sets which have been looted or purchased from Asiatic countries, so many of which are of rare cloissoné enamels. Some of these of Japanese origin are mentioned in Chapter XIV. Of the minor bronzes, replicas of temple relics, there are many beautiful koros or incense burners. Other bronzes serve the purpose of ornament in the Western countries to which they have found their way. In Fig. 68 is shown a beautiful bronze. The sacred carp is inlaid with gold and silver and is exceptionally well finished. The pair, of which it is one, came from Japan about thirty years ago, and are of much finer workmanship than many of the more modern replicas.

Household requisites as well as ornamental treasures have been made with care by hammer and engraving tool into things of beauty as well as usefulness. The household requirements of the Japanese are limited in number, but in the entertainment of her friends the Japanese lady is able to cause envy among her Western sisters because of the beauty of her kettles and brazier. The kettle shown in Fig. 66 is one of a toilet set of hammered brass, engraved with badges and foliage. It was probably produced early in the

nineteenth century, before Western commercial ideas began to invade the workshops of Old Japan. In conjunction with such kettles (the Japanese name of a kettle is *yuwakashi*) metal bowls were used, the water being poured over the hands of the fair Japanese and her guests by attendants, who also held the bowl to catch the dropping water.

In Old Japan there was much patience as well as skill, and the methods adopted by the artists of those days would be too tedious and expensive now when the merchants buy and sell and compete in Western markets. The processes by which the beautiful bronze objects were moulded took time, and the incising and inlays could never be paid for in proper proportion to the labour expended on them. The metals of which Japanese bronzes were made consisted of curious alloys, the composition of which was long kept a secret. One of their finest brasses is known as *sinchu*, consisting of ten parts of copper and five of zinc. Another very beautiful copper is called *shadko*, in which splendid hues are imparted by the treatment of acids; in this alloy there is one part of gold to ten of copper, to which is attributable the splendid colouring of the so-called bronze. Older methods, however, are gradually giving way to more economic production on Western plans and formulæ, so that in time perhaps the Eastern and Oriental influence and characteristics of Asiatic bronzes, so charming and so much appreciated by collectors, may diminish if not disappear altogether.

XIV

IDOLS AND TEMPLE RELICS

INDIAN IDOLS.

FIG. 69.—AMIDA.

FIG. 70.—A "BLUE" TARA.

FIG. 71.—AMITAYUS.

FIG. 72.—VAJRA DHARMA.

FIG. 73.—AMITAYUS.

CHAPTER XIV

IDOLS AND TEMPLE RELICS

Varied shrines and many idols—Indian idols—Temple vases and ornaments.

THERE are some who hold it to be a wicked thing to loot the temple of a heathen deity, and regard it as sacrilege to ruthlessly tear down the idol from its shrine. Others glory in an opportunity of proving the powerlessness of the man-created idol to save the temple from ruin and desecration. Yet there are many who recognize in these idols of wood, stone, and metal, emblems and symbols of ancient faiths in which there may be a greater reality, and, for all we can tell, potency, to those who look beyond the mere shrine, than appears at first sight. Notwithstanding all that, the multiplicity of gods and the number of so-called deities make many sceptical about the worship of their devotees, and there are few who feel much compunction when adding such objects as metal idols to their curios—when they are able to secure them honestly.

Varied Shrines and Many Idols.

Needless to say the faiths of those who worship

"unknown gods," from whatever source they may have come, differ. The very uncertainty of the religions, which admit of varied deities, has fostered the increase of ceremonies and the change in rites, which, added to local folk-lore and myths which have gained in the telling, have caused new idols to be set up. It was so in pagan Greece and Rome, and it is the same in some parts of the world to-day. To these causes we may attribute the number of idols of different types, or the same idols represented with other attributes, which the collector of metal meets with. There is a strange fascination about the stories of pagan and heathen deities and their influence over men, and to obtain the full interest and delight from such a specialized collection the collector must become a student of Eastern and other religions and priestcraft.

The temples in which religious rites have been, and in some instances are still, observed, vary in importance just as the associations around the cathedrals and ruined abbeys in our own land differ from those almost absent in the more recently erected churches. The wealthy Indian, not unnaturally, employed artificers in brass to make models of the great shrines, and some of these rare works of metallic art are to be seen in the Indian Museum. Several are of eighteenth-century workmanship, among them beautifully modelled temples of Krishna. Incidentally it may be mentioned that secular buildings have been reproduced too; notably there is a very fine model of the Palace of the Winds at Jaypore, Rajputana, which was presented by the Maharajah of Jaypore.

FIG. 74.—JAPANESE PRICKET CANDLESTICK IN THE FORM OF CRANE AND TORTOISE.

(*In the Victoria and Albert Museum.*)

Some may regard the collection of idols as a curious hobby; others possibly see in them only art treasures to be valued for their intrinsic worth, for many idols are enriched with precious stones and jewels and are overlaid with gold and silver. Such objects occupy a different place from the cruder idols of wood and stone, cut and carved by savage races. We can well understand that the refined worker in metals spared no pains to make his idol or fetish beautiful and something to be admired.

Indian Idols.

Of Indian idols there are many: Buddha is so widely held in esteem that it is no wonder that so many representations, varying in size, have been produced. The favourite position, known as the "Witness" attitude, is that with which collectors are most familiar.

Indian idols are of many forms, among the commoner varieties being those of Vishnu, Lakshmi the wife of Vishnu, and Siva. Many images of copper, afterwards gilt, come from Thibet and Nepal. The curiosities associated with the Lamaist worship have become familiar of late years. One of the representations of Amida, holding in her hand the teppattsu, is shown in Fig. 69. A "blue" Tara is illustrated in Fig. 70; Amitayus is shown in Fig. 71; and Fig. 72 represents Vajra Dharma holding the dorge. In Fig. 73 Amitayus is again shown holding the reliquary and wearing a jewelled collar. An interesting Lamaist altar ornament is a copper skull bowl, used as a receptacle for the sacred beer or

wine of life. There are also Thibetian holy water jugs, beautifully inlaid with silver. In the Victoria and Albert Museum may be seen a colossal Buddha (Daibutsu) of sixteenth-century workmanship, which came from a Japanese temple. Appropriately placed close to it is a massive pair of lanterns of bronze, which were originally a gift to the temple of Miyoshino-tenjin by the feudal lord of the district. Most of these temple relics—idols and ornaments—were made of a special alloy known in Japan as *Kara kane*, which means Chinese metal, from which it may be inferred that this alloy was known and employed in China before it came into general use in Japan.

Temple Vases and Ornaments.

The mystical beliefs of China are chiefly Buddhism, Confucianism, and Taoism, to which should be added ancestor worship, and in connection with all of them there are special objects of veneration, which we group together under the somewhat generic term of "temple relics."

From Japan as well as China we get many fine temple sets. Whence come they? some may ask. Perhaps they have been discarded because they have been replaced with newer or more elaborate ornaments, although they may have been obtained through the cupidity of some of the temple attendants. From whatever sources they came there are numerous examples in the London curio-shops and in our museums. The crane and tortoise have long been held in veneration in Japan. The tortoise especially is frequently found on old Chinese pottery and metal-

FIG. 75.—JAPANESE RITUAL VASE.

FIG. 76.—SMALL TWO-HANDLED RITUAL VASE.

FIG. 77.—CIRCULAR VASE ON STAND.

work, as well as being fashioned in Corea and Japan. In Fig. 74 there is a Japanese pricket candlestick, in the form of a crane and tortoise, of eighteenth-century workmanship, and it evidently formed one of a set of five altar pieces. Some of the altar sets gave special prominence to two flower vases as part of the set, of somewhat later style of decoration to Fig. 90; it was probably made early in the nineteenth century. This vase was formerly used in a set in which a figure of Buddha occupied the centre. It was a common practice to hang over the Buddhist altars lamps, many of which are to be seen in our museums. In Fig. 75 is shown a Japanese ritual vase, intended for wine (*hu*); it is of square shape, with cover of Kwei and dragon pattern, animal feet and bosses on the shoulders, and bird-shaped arris on the lid, the inside of which is inscribed with twelve characters; the patina of this vessel ranges from deep brown to bright malachite-green. Fig. 76 is a smaller ritual vessel, with two handles at the shoulder and one meander band and knob. The vase shown in Fig. 77, with dragon handles, a beautifully patinated specimen, shading from brown to red with green accretions, is a ritual *tsui* or vase for offering corn. These remarkable relics formed part of a large collection dispersed recently at a well-known London salesroom. Now and then less important pieces come under the hammer, and it is by no means difficult to secure for a small outlay an excellent representative collection of these deeply interesting objects associated with idol worship.

XV

NATIVE METAL-WORK

CHAPTER XV

NATIVE METAL-WORK

Outside influences—Benin bronzes—Other African curios.

THERE are few collections of copper and brass without a fair sprinkling of curiously formed and often crude objects which we class under the generic term "native curios." There is much that is of extreme interest in the work of the smiths and founders of races possessing but little apparent touch with civilized nations; for such metal objects are true guides to the state of the advancement of the peoples of the countries from which such curios come. We delight in the art of early Eastern nations, and find much to admire in the almost barbaric ornament of Asiatic metal-workers of mediæval and even later days, as counted by the progress made by European artists at contemporary dates. The marvellous skill with which the natives of India and other Asiatic countries incised and inlaid their metal wares has already been pointed out. There is, however, an especial charm about the metal-work of nations we are apt to class as "savage," or at least untutored, if not uncivilized.

And we would not have it otherwise, for it is from these curios—metal and of other materials—that we are enabled to trace the influences of other countries with whom those races or tribes have had dealings in the past. We are to some extent able from these antiquities to connect the links in the chain of nations, and from the characteristics of their art (?) to settle their origin and affinity to other races.

Outside Influences.

The Ethnological Gallery of the British Museum is one of the finest instructors. The silent exhibits tell the observant man or woman, boy or girl, much that cannot be learned from book knowledge. In the cases in that gallery are many objects fashioned by peoples who until recently were in their Stone Age, and had no knowledge of the outer world. There are some who from the curios—old and new—have apparently, until taught their use by travellers and traders from the far-off West, never discovered the value of metals. Some of the native races—not a few of them fellow-subjects of the Empire—as yet prefer wood, stone, and crude pottery vessels and utensils to metal, judging from the very limited use of the few brass or copper objects they possess, those few, probably, being imported. The ethnology of the race is traced in these relics, especially in the really old ones. In a few instances by way of contrast, metal objects, although so limited, are conspicuous. They are chiefly confined to the native countries brought under the influence of more advanced peoples; as instanced by the work of the

Sinhalese, the natives of Ceylon, who early came into touch with the metal-workers of India. Another native race by their wealth of rare metallic curios, the art of producing which they have lost, are shown to be a people with a past; thus it is with the tribes of Southern Nigeria in and around Benin City. On the occasion of its capture by the British in 1897, it was found to possess a remarkable store of wonderful bronzes, evidently of the sixteenth or seventeenth centuries. In these and other native curios the collector revels, and in their study finds history, geography, and even the folk-lore of nations revealed; for in such curios there are stories in brass of social life, religious functions, ceremonies, and sacrifices.

The Benin Bronzes.

A few years ago very many bronzes (nearly pure copper) were sold under the hammer. They were looted from Benin City during the war which ended in the country in and around the city being taken by the British troops, and eventually incorporated in Southern Nigeria. These wonderful bronzes throw a light upon the history of that country, and tell of a powerful nation far advanced in the art of modelling and casting metals long before they had come into close touch with Western influence. This remarkable people who possessed so much wealth in copper and in ivory have long gone; their descendants or the tribes occupying their city have no knowledge of the craft, and apparently retained these relics of barbaric splendour with silent awe. The entire series of bronze panels from which the figures

so cleverly stand out in bold relief, must have presented a wonderful sight to the British soldiers as they entered Benin. The collection in the British Museum was sent home to this country by Sir Ralph Moor, K.C.M.G., H.M. Commissioner and Consul-General for the Niger Coast Protectorate. It is impossible to describe their beauty or the details of the elaborate modelling of the dress, arms, and costumes of the Benin king and his chiefs and officers as they existed in the sixteenth century. There is a model of the king's house, his attendant guards, high officials, a sword-bearer, and another bearing a ceremonial axe. Some of the bronzes represent musicians playing various instruments, and others performing all kinds of functions. The bronze panels of fishes and animals are very lifelike, especially bulls, crocodiles, and the heads of oxen, even the twisted cords with which the animals were tethered being correctly modelled. The bronzes representing Europeans are exceptionally valuable in that from the costumes portrayed the date of those bronzes has been fixed, approximately. The matchlocks and flint-guns are reproduced with the greatest exactitude, as also the Egyptian figures, copied presumably from the remains of Ancient Egypt, with which these metal-workers were evidently familiar.

In addition to the panels of copper, which show marks of how they were attached to the walls, were bronze masks or warriors' heads which served as stands for the splendidly carved tusks of ivory also discovered when the expedition visited that country.

There are many minor objects in bronze which show that this remarkable civilization, now lost, was far advanced in the arts.

As it has been suggested Benin relics are not entirely confined to museum specimens, and collectors are not without opportunities of securing pieces.

Many of the early tribes of Africa had knowledge of metal-working, although some have lost or neglected to practice it.

Other African Curios.

Some metal curios were included in the trophies brought to this country at the time of the Ashanti Expedition, among the rare regal metal-work being an old brass vase, with repoussé decorations and a copper dragon handle. It was discovered behind the house of King Prempeh's aunt, who had been acting as Regent. Another curio discovered in the same district was a brass box containing gold dust. Bells, too, have been brought from Ashanti; one in the British Museum is the executioner's bell, which was rang prior to an execution.

There are many bronzes from Southern Nigeria, especially some curious ornaments worn by the women. Some of these are veritable antiques and were found buried; many are finely patinated and heavy. Some of the bangles are beautifully formed and highly decorated with inlaid enamels.

Some very interesting brass castings come from Lagos, not at all unlike the Benin modelling, except that they are in brass instead of pure copper. They include figures of natives, some on horseback, others

in the act of shooting with guns. There are brass staves of office carried as symbols of authority by the messengers of the Oshogbo, a native secret society; and there are spoons, knives and other domestic sundries, as well as armlets and anklets of copper and brass.

From north-east Central Africa we get a little metal-work, some of the head-dress ornaments being enriched with circular brass plates, on which are repoussé decorations. Among the curios from this district in the British Museum are several exceptional pieces, one being a head-dress or helmet of brass with circular brass ornaments.

The knives used in ceremonials are often very handsome. There is a fine executioner's knife from north-east Central Africa, with brass studs all over the wood handle. Another chief's knife, which came from near the Stanley Falls, is decorated with strips of copper and brass.

The metal castings from Central Sudan, representing ostriches, giraffes, and camels, are cleverly done, and with bangles and anklets make up an interesting group.

It is curious how valuable finds are sometimes made many miles from the locality where the object was made. It is the same in our own country, for we dig and find a bronze from ancient Rome, brought over by the conquering armies of the Romans when Britain was brought under the Imperial sway. Our armies have probably left relics behind them in the past as in the present, for it is no uncommon thing for reminders of the

Crusaders and others to be found even in Africa. One of the most remarkable finds was a large bronze jug and cover now in the British Museum; on it are the arms of Richard II of England, and two mottoes in Lombardic letters: "HE THAT WILL NOT SPARE WHEN HE MAY, HE SHALL NOT SPEND WHEN HE WOULD" is one; the other reads: "DEEM THE BEST IN EVERY DOUBT TILL THE TRUTH BE TRIED OUT." This splendid jug was found in Ashanti; the date of its manufacture was about A.D. 1400.

The South African curios in brass are very limited; they consist chiefly of collars and armlets worn by the women of Basutoland and Bechuanaland, and by the Kaffir women who have also girdles of brass cleverly formed.

Although by no means numerous and of limited variety, a few objects of native workmanship are worth securing if only to compare the way in which natural ingenuity has at different times helped the craftsman and enabled him to work even metals without any instructions from nations more advanced in their use.

XVI

CONTINENTAL COPPER AND BRASS

FIG. 78.—BRONZE OVIFORM EWER.

FIG. 79.—BRASS EWER WITH ARTISTIC HANDLE.

CHAPTER XVI

CONTINENTAL COPPER AND BRASS

Italian bronzes—French art—Dutch brasswork—German metal-work.

THE Italian renaissance in art exercised such a wide influence upon manufactured goods in this and other countries that the collector of antiques naturally turns to the achievements of the artists in metal who worked in Florence and Rome for the highest ideals he can seek. In this he is not disappointed, for just as the connoisseur of ancient art finds his delight in the bronzes of Greece and Rome, the collector of more modern art sees grace and beauty combined with skilful grouping in Italian craftsmanship. European influence has been brought to bear upon the metal-work of the world at different times, but it has not always come from the same country. At different periods the metal-workers of certain localities appear to have made their peculiar characteristics take precedence of others. In most of the European countries quite distinct styles and even unique treatment of metals have been noticeable; so much so that our museums to-day contain

groups of metal-work having little or no affinity to one another, although coming, perhaps, from towns not far removed in point of geographical position. The collector recognizes as distinct the bronzes of Italy; the screens, candlesticks, and ecclesiastical metal-work of Spain; the beaten bronze, champlevé enamels, and the decorative brass of the Empire period of France; the eighteenth-century Dutch brasswork; the metal forged and cast in Germany, and the decorative copper and brass of Turkey showing such distinctly Oriental influence in Saracenic touch. To study all these rival styles at their best the collector, however large his private collection, must perforce visit either one of the more important Continental museums or the Victoria and Albert Museum at South Kensington, where so many cases are filled with Continental works of art in gold, silver, and the baser metals. Local museums rarely possess a selection large enough for comparative purposes. The loan exhibits from the national collection, carefully selected as representative specimens, are very helpful, and many such loan cases strengthen local exhibits and add interest to them. In the United States of America public museums are well arranged with the view of showing the metal-work of different countries at varied periods, and many of them are peculiarly rich in exhibits of domestic metal-work which was taken over in the early days from Europe.

As a guide to curators and others wishful to secure the right kind of exhibits it may be useful to mention the contents of a case on view at a

South coast town public library recently. There were some beautiful Italian bronzes of the fifteenth and sixteenth centuries, a damascened candlestick from Venice, a Florentine statuette, a handsome cabinet handle chased with foliated ornament, a bronze mask of Pan, a table lamp stand with winged lions at the base, and a handsome ewer, the body of which was ornamented with foliage, around it figures representing the triumph of Bacchus, a typical seventeenth-century specimen. Among the minor objects in that case were vases from many countries, door knockers, and a few examples of Dutch metal-work, decorative and artistic.

Italian Bronzes.

The metal-workers from the sixth to the tenth centuries, when so many decorative bronzes were being made for St. Peter's and Italian churches, derived their inspirations from Byzantium, hence those early works were often inlaid with silver and gold, and were quite different from those of later date. Art developed, and gradually a more distinctive character was given to the bronze gates and candelabra which were made with such consummate skill. One of the greatest triumphs of that period was the great candelabrum in Milan Cathedral, wrought in the thirteenth century. Its height is 14 ft., and it has seven branches for candles, the stem being supported by four winged dragons. It is one mass of marvellous scrollwork, relieved by the introduction of figures, each one of which

is perfect in itself—a study of expression and character. Casts of these remarkable pieces of metal-work may be seen at South Kensington.

In the fourteenth and fifteenth centuries the Florentine artists worked. It was then that statues in bronze were sculptured by Verrocchio, Donatello, and others. A century later the wonderful candlesticks in the Certosa, near Pavia, and in the cathedral at Padua, were made. It was about that time that Venetian metal-workers were fashioning so much that was beautiful in domestic utensils and the minor church ornaments.

From that time onward collectable brasses were made, and after long years of use they passed into the category of antiques, rendered beautiful by their artistic merits, and possibly by the touch of age. Even then there was an Oriental look about many of the designs, but it seldom intrudes, and does not spoil the effect of the forms and style so clearly Venetian. Such vessels were chiefly made for the then wealthy merchants of the city, and often their arms were incorporated into the design. Fig. 78 is a bronze oviform ewer made in Venice about 1530. Another beautiful vase is shown in Fig. 79. Other objects much favoured were candlesticks, hand-warmers, and perfume sprinklers, to which must be added the more strictly utilitarian.

The Spanish metal-workers do not appear to have developed a very well-defined school of metallic art of their own. They were especially noted for their highly ornamental jewellery; in the common metals they were influenced by Italy, and to some extent

Germany. It is said that the finest piece of work accomplished in the country was the great sixteenth-century candelabrum or *tenebrarium* in Seville Cathedral, the work of Bart. Morel in 1562.

French Art.

Connoisseurs of the fine arts naturally regard enamels of Limoges as the greatest achievements of the country (see Chapter XVIII). There is, however, much to admire in the early unadorned metal-work, especially that made in the thirteenth and fourteenth centuries — effigies in beaten copper, some portions of which were usually adorned by coloured "champlevé" enamel. They were afterwards desired by Englishmen, and some good examples of "imported" effigies are to be seen, a notable example being one on the tomb of William de Valence in Westminster Abbey, erected about 1296. Of domestic metal-work there are not many early pieces. In Fig. 82 is shown a cup or ewer of brass with artistic handle and spout ornamented with a grotesque mouth; the date assigned to it is 1570. It may be seen in the Victoria and Albert Museum, where also is deposited a fine seventeenth-century ewer or tankard with plain cylindrical body and a deep and long spout with fancy handle (see Fig. 81). There is also a trumpet of brass, dated 1738, in the same gallery; it has upon it the owner's monogram, "S.M.A.," ensigned with a count's coronet and crest.

Dutch Brasswork.

The brasswork from Holland, largely imported

into this country at the commencement of the eighteenth century, although decorative, cannot be claimed as artistic. Most of the objects are strictly utilitarian, and the ornament stiff and formal; they were hammered by hand, an effective finish being made by small punches, repoussé work being occasionally added. Fig. 80, which represents one of the larger pieces, illustrates a highly ornamental cistern with cover and tap. Its shape is semi-circular, a dome-shaped back acting as a hanger; that as well as the perforated grille under the cistern being ornamented. The chief ornament consists of star devices, the points of which are united together by curved lines composed of small straight indentations. In the Victoria and Albert Museum there is a Dutch foot-warmer, the sides of which are ornamented with repoussé panels of flowers and circular bosses; in the centre of the top, which is slightly curved, is a medallion engraved "I.W.H.M. 1733," surrounded by open-work decoration and floral scrolls arranged in geometrical patterns, on either side of which are birds.

The brass milkcans used by modern milk sellers, and the beautifully ornamented churns and milk perambulators seen in some neighbourhoods, are not altogether new or the outcome of modern advertisement. In Holland brass ornament has been used on tinware for many years, and some very quaint old milkcans and dairy utensils in shining polished brass are met with by collectors who visit Holland. The milkcans of that country, or perhaps more correctly large bowls, in which milk and cream

FIG. 80.—DUTCH ORNAMENTAL BRASS CISTERN.

FIG. 81.—FRENCH EWER OR TANKARD WITH FANCY HANDLE.

FIG. 82.—FRENCH EWER WITH GROTESQUE MOUTH (SIXTEENTH CENTURY).

(*In the Victoria and Albert Museum.*)

re served have double handles, and make extremely handsome flower-bowls or fern-pots on the table, although perhaps collectors would consider such a desecration an improper use for a genuine antique. Many of the chestnut roasters, skimmers, and brass chimney ornaments used in England in the eighteenth century came from Holland. The artists of that country were famous for the characteristic Dutch scenes engraved on their metal-work, just as they were for their tiles with quaint windmills and pictures of peasants in native costume on them. So famous has the collection of these brasses become that much modern metal-work, copies of genuine antiques, has been sent over for sale in London curio-shops. Some of these reproductions are excellent copies; others are "too new" and would scarcely deceive the amateur. Caution should be observed, especially when buying "old time" fire-brasses, knockers and trivets.

German Metal-Work.

Curios, as well as modern antiques "made in Germany," are not always labelled as such; there is, however, a distinctly German look about old metal-work from that country. Elaborate and massive with its wealth of floral embellishment, some of the German metal-work of early days stands out conspicuously. Some elaborate cast bronze gates and door furniture enriched the churches of the eleventh and twelfth centuries. Augsburg and Nuremberg have always been famous centres for artistic metal

work, and in those towns many objects large and small have been made. Among minor works are the very handsome lock plates and cases. The shapes of domestic utensils, especially of ewers, were very quaint. There is a German aquamanile or ewer in the form of an animal, embodying a lion and stag, along with several others equally as curious, in the British Museum. Nuremberg contributes to our national collection a variety of hand wash-basins in brass; the earlier examples being richly ornamented with engravings typifying different virtues and vices; St. George, the patron saint of England, also figures on some pieces. Turkish metal-work includes copper ewers, chased and decorated with enamels, mostly with handles and spouts, some of the sets or pairs consisting of ewer (*ibrik*) and basin (*tisht*). These copper vessels are sometimes embossed with scale ornaments. There are braziers and some vessels of bulbous form, mostly of bronze, and now and then Turkish collapsible lanterns of brass with pierced decorations are met with.

XVII

SUNDIALS, CLOCKS, AND BRASS INSTRUMENTS

CHAPTER XVII

SUNDIALS, CLOCKS, AND BRASS INSTRUMENTS

The mystery of dialling—Some old dials—Antique clocks—Old watches —The weather—Scientific instruments.

THE modern man can scarcely realize what it must have been in this England of ours when clouds obscured the sun, and thick mists drew a veil over the shadow cast by the gnomon, before clocks were known. The time of day was of less importance when the sundial on the church tower, or on a pillar erected at some convenient place, had to be consulted, when the sun shone it is true, but even then many must have inwardly fretted and rebelled against the uncertainty. Reader, have you ever spent a day away from public clocks in the country when the sky was overcast *without a watch in your pocket*? If not, do it now, and the result will be startling. It will create a sympathetic touch with the past, and bring vividly to mind the trials of patience which had to be endured when under such conditions inscriptions on dials were read, but no clear line marked the onward march of Sol.

The Mystery of Dialling.

Dialling is a science which few except experts understand now; the antiquary takes little note of it as he gazes upon the old dial plate and makes out the inscription upon it. The collector gladly buys the brass dial with its quaint lettering and division marks without even knowing where it came from, or what kind of stone column or pillar it originally capped. Yet there is far more interest in an old sundial installed in a modern garden amidst reconstructed old-world surroundings when the origin of the relic is known.

We have no record of the type of sundial referred to in Isaiah xxxviii, 8: "Behold, I will bring again the shadow of the degrees which is gone down on the *sun-dial* of Ahaz, ten degrees backward." There are, however, records of the sundial of the Chaldean astronomer Perosus, who lived about 340 B.C. It consisted of a hollow hemisphere placed with its rim horizontal, having a head or globule fixed so that as long as the sun shone above the horizon the shadow of the head fell on the inside of the hemisphere.

In more recent days the making and fixing of the dial with its gnomon was carried out on fixed principles, and there is now no difficulty about such an installation provided that the same astronomical conditions are observed. (For rules governing dialling, see Glossary.)

Some Old Dials.

The pattern known as the garden dial is that commonly met with (for the large dials once fixed on

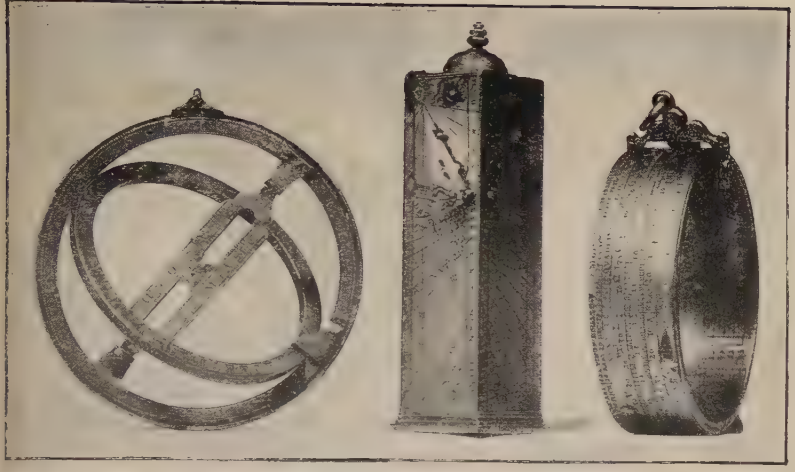


FIG. 83.—EARLY DIALS—ON THE LEFT AN ARMILLARY DIAL ; IN THE CENTRE PILLAR DIAL ; AND ON THE RIGHT A RING DIAL

(*In the British Museum.*)

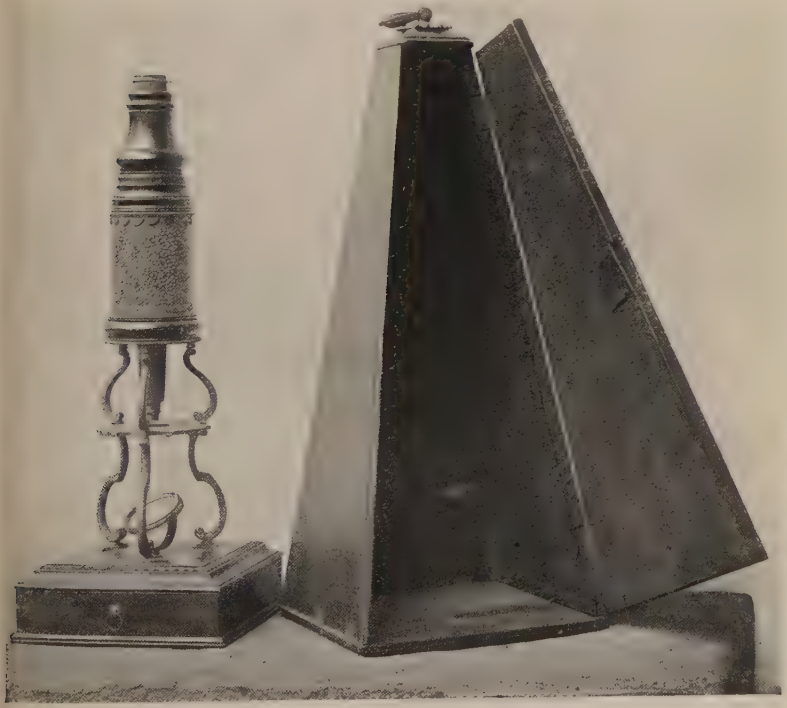


FIG. 84.—CURIOUS OLD MICROSCOPE, MADE IN 1780.

(*In the Municipal Museum, Hull.*)

church towers and in public places rarely come into the market); and the old dial plates seen in curio-shops have come from such pillars. Charles Dickens had a fine old sundial in his garden at Gad's Hill Place, and it has often been copied. The globe dial, set on suitable pillars, has been made frequently for modern antique gardens. An enterprising maker of dials purchased the beautiful balustrades of old Kew Bridge when it was removed a few years ago, and capping them with replicas of old dials—in some cases with genuine antiques—produced excellent examples of the old type of garden sundial. Similar dials, more imposing in size, are met with in curious and yet very suitable places by motorists, cyclists, and others when touring in the country. A charming Elizabethan relic is the stone bridge across the River Wye in the village of Wilton, near Ross. On the north wall of the parapet is a stone pillar surmounted by a sundial having four faces—an interesting landmark and often admired; and when the sun shines on it the traveller invariably pulls out his watch and compares it with the shadow of the gnomon. There were once many famous dials *in situ* in London; most of them are gone; there are some, however, readily seen, like the noted pillar dial in the Temple and that on the front of one of the old buildings in Lincoln's Inn.

Of other forms of dials, the eccentricities of the horologists they might be called, there are the "goblet" dials in the form of a cup, the hour-lines being engraved on the interior; pillar dials which are cylinders with movable gnomons; the quadrant,

in the use of which the altitude of the sun is taken through pierced sights, the time being shown on curved hour-lines by means of a plumb-line hanging from the angle ; and the ring dials, which were very popular in England down to the year 1800. In Fig. 83 are shown earlier dials of the sixteenth and seventeenth centuries. On the left there is an armillary dial by F. Culpeper, of London. In the middle there is a pillar dial dated 1567, and on the right of the figure a ring dial made by Humphrey Cole in 1575, all three important types. Perhaps one of the chief delights of the study of sundial plates is to read and make out the different mottoes and legends on them—most of them relating to the flight of time, some alluding to man's duties which, when neglected, can never be made up, for "Time and tide wait for no man."

Another type of dial is the portable one, in which form dials or pocket clocks, as they were sometimes called, can be collected—and they are generally of brass, some being very decorative.

Antique Clocks.

There is no intermediate stage between the general use of clocks and watches and sundials, for their use overlaps. We have but to look at many an old church tower on which is to be seen the dial still operative—for sun and gnomon fail not—and the clock which has told the time for many years. Both were probably working before pocket clocks or watches became general and timepieces were to be found on the mantelpiece or sideboard.

Brass was used from the commencement of clock-making for wheels and dials; and wonderfully, too, the early clockmakers cut and carved the metal into the required form and gauged the works with accuracy. Some may be familiar with that wonderful astronomical clock in Wimborne Minster, made in 1220 by Peter Lightfoot, a monk of Glastonbury, who also constructed a clock for Wells Cathedral. In it, according to the early belief that the sun, moon, and stars revolved round the earth, the sun travels its appointed circuit every twenty-four hours, and by its position marks the time.

In the evolution of the clock there have been many marked stages. The clock when first devised was a great stride from the sundial, the beautiful plates of which have already been described. Progress followed, and in a century or two clocks with wheels and complicated mechanism, which when once set going and wound up periodically told the time with exactitude, enabled the populace to know the time of day even when the sun was not shining. That was the age of decorative art, and many of the brass plates and dials were magnificent in their engravings, glorious in their beautiful old fretwork, and rich in brass cherubims and emblems of Old Father Time. Moving figures were in the early days regarded as ideal attractions in clocks. The two old figures which strike the hour and go through some quaint evolutions over the clock which for many years has been a great attraction in Cheapside, are typical of the figures which in miniature might have been seen playing on brass gongs and chiming

bells in many towns in the sixteenth and seventeenth centuries. They were in abundance in Norwich and towns in the eastern counties, seeming to reflect the old Flemish cities on the Continent, where they are even now fairly common. Collectors are very enthusiastic in their search for genuine "Cromwell" or lantern clocks. A few years ago they might have been found discarded on the old metal rubbish-heaps of the clockmaker. To-day these clocks, all brass in their construction, are polished bright, set going once more, and treated with care; good specimens changing hands for sums varying from eight to fifteen pounds. Originally they were usually placed on a bracket, over which was often a wooden hood to protect the clock. Then came a hinged glass door, and in that we have the origin of the "grandfather" with enlarged dial and rich oak or mahogany case reaching down to the ground.

Those who wish to study the beautiful dials and engraved faces of clocks and watches in order that they may realize the difference in the products of makers during the last few centuries, should visit the splendid collection in the Guildhall Museum, loaned by the Clockmakers' Company. The work of the old clockmakers was that of the very best. It was made to last, and the metal they chose for their operations appears to have been very suitable for the purpose. In evidence of the lasting quality of old brass works, a well-known writer has put forward the interesting story of a chamber clock presented by Henry VIII to Anne Boleyn on their wedding day. It found its way into the Strawberry

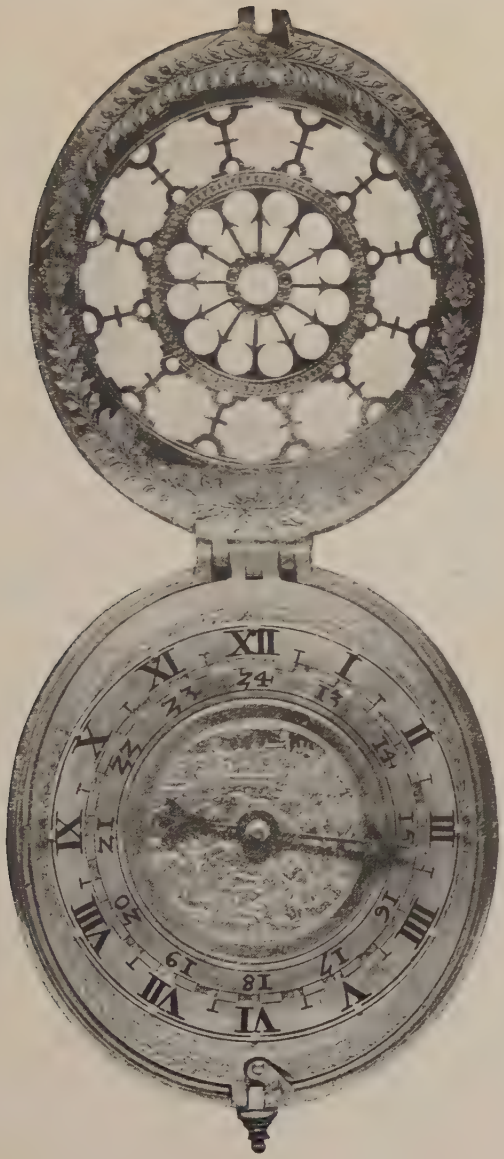


FIG. 85.—ENGRAVED POCKET CLOCK.

Hill collection of Horace Walpole, and at the famous sale of those interesting curios and souvenirs of great persons that noted minister had gathered together, it was purchased for £100 by the late Queen Victoria. Harrison Ainsworth says: "This token of endless affection remains the same after three centuries; but four years after it was given, the object of Henry's eternal love was sacrificed on the scaffold. The clock still goes, but surely it should have been stopped for ever when Anne Boleyn died!"

The advent of table clocks came with the discovery of the use of a mainspring by the Nuremberg clock-makers in the sixteenth century. In the British Museum there is a clock in the form of a ship made for the Emperor Rudolph II in 1581. There are many other fine examples of curiously designed clocks, including a water clock by Finchet, of Cheapside, and a French astronomical clock with astrolabe, and others with automatic figures on view there, as well as very remarkable types in the collection of clock dials and watches given to the Museum by the late Mr. Octavius Morgan.

The early clocks, the dials of which were of brass, had only one finger, for the minute-hand was not known until 1670, and the second finger a much later invention.

In Fig. 85 is a typical example of a brass engraved watch clock face and dial, which has a perforated hinged cover and is exceptionally well engraved.

Old Watches.

Watches were costly in the days when so much

time was expended on their manufacture. Those were the days of good workmanship in which watchmakers excelled. They put much labour into the ornamentation of the works, "watch-clocks," and dial plates, so many of which were beautifully engraved, tooled with great skill, and cleverly perforated. The dials were in early days unprotected, hence the need of a case, often of brass, and when made of some other material were frequently ornamented with brass inlay. It was not until the middle of the seventeenth century that glass or crystal covers were invented; that was about the time, too, when the enamelling of dials came into vogue.

The pocket watch brought with it fobs, chains, and watch-keys or winders, mostly of brass, which should not be overlooked. In a representative collection there are crank keys similar to large clock winders, but, of course, made in miniature. Then after various developments brass and Pinchbeck fob keys came into vogue, and later still ornamental keys with and without the addition of stones, the majority being made in brass. A number of these little objects can still be collected quite cheaply, and nicely mounted make a very interesting addition to the more ornamental side of brass metal-work.

Forecasting the Weather.

The weather has found men a subject for discussion and given them opportunities of speaking a pleasant word of comradeship when meeting in the country or in town. To comment upon its fickleness has become as common a mode of salutation as passing

the time of day. The topic is an ancient one and the interest in it has been sustained, for to gauge the coming changes has taken the attention of men from the earliest times. To study the fleeting cloud, to note the coming storm by the direction of the wind, or to notice the damp in the air as the mist rises and is wafted over the fields, has always been a favourite occupation. It was so before the day of barometers and scientific instruments, and it is equally so by those who prefer the pronouncement of the weather prophet rather than the barometer gauge. Galileo is said to have invented the thermometer, but it was his pupil Torricelli, who discovered the barometer. His townsmen in Faenza, in the north of Italy, some years ago erected a monument to his memory, putting up the biggest barometer known. In common with other scientific instruments the barometer has afforded opportunities to the worker in metal and to the art designer, for like the clock case it has been made a thing of beauty as well as one of use. The very remarkable barometer illustrated in Fig. 86 is an elaborate work of the brassfounder and exceedingly ornate. It is a very exceptional piece, but there are other barometers of considerable beauty in the hands of collectors of old bronze and metal-work.

Some of the old scientific instruments are very clumsy looking when compared with modern workmanship. About them it is true there is a quaint beauty and a silent tribute to the skill and ingenuity of early inventors, those who were but groping, perhaps blindly, in the initial stages of an undeveloped

science. Scientists always take a delight in the instruments which their predecessors have used, and when they realize by comparison the difficulties the early pioneers had to contend with on account of the inefficient instruments in their possession they wonder at the advance that particular science made in their day.

In Fig. 84 we illustrate a curious old microscope and case, made about the year 1780. It is on a mahogany stand, in which is a drawer containing four magnifying powers. It formerly belonged to a Mr. Charles Sherborne and is now in the Hull Museum, where, as the connecting link between the older type and the modern, there is another interesting microscope made some fifty or sixty years ago. The engineer, mechanic, and scientist find much pleasure in the curios which were associated with their professions in former days, and delight in the possession of "old brass" which seems to bring them nearer to the great men who years ago laid the foundations on which present-day advance has been built.

Engineers have been very skilful in creating models of engines and machinery with which they have been familiar, and in reproducing in miniature replicas of noted engines which have been used for practical purposes. These little models, some of which were made more than a hundred years ago, in days when steam power was but in its infancy, have been very valuable to engineers to-day, in that they provide them with actual models of old-time engines, the details of construction of which might otherwise have been lost. In one of the museums at South Kensington there

FIG. 86.—A HANDSOME BRONZE BAROMETER.

are many of these scientific and mechanical models in brass, some of them working on the penny-in-the-slot principle, so that visitors can by the expenditure of a few coppers set in motion any machine they are interested in, and so judge of the actual effects of old-time inventions as illustrated by models which have been made to scale.

In addition to working models of large objects there are some remarkably small models which are stored and treasured by collectors. Some are so small and minute, although perfect in every detail, that it is difficult to understand how the worker in brass even if he had been a jeweller and accustomed to fashion the settings of small stones could so accurately have produced such tiny machines. It is said that the smallest engine in the world, a beautiful piece of metal-work, owned by an American collector, stands on a ten-cent piece! Yet remarkable as it may seem, when connected with an electric power cable of very small calibre the engine starts off as if it were a full-size horizontal engine. The chief materials used in the construction are copper and brass, although the band of the fly-wheel is of solid gold. So small is this little engine that its measurements are all taken in sixty-fourths of an inch. Thus the diameter of the fly-wheel, practically the largest piece of mechanism in the construction of the engine, is $\frac{28}{64}$ in., and the fly-wheel band only $\frac{7}{64}$ in. The valve rod is only $\frac{1}{64}$ in., and the outside diameter of the cylinder $\frac{12}{64}$ in.; completed, standing on the small coin referred to, the engine weighs 3 dwt., a truly remarkable work of metallic art.

XVIII

ENAMELS ON COPPER

CHAPTER XVIII

ENAMELS ON COPPER

Processes of enamelling—Chinese and Japanese enamels—British enamels.

COPPER has been used frequently as the most suitable metal to coat over with enamels, to be afterwards fired or fixed. Even the ancients discovered the art of colouring the metal-work they had wrought by the aid of different enamels more or less translucent. Such substances were used in varied forms, often as paste, filling up incised designs, the workmen in some cases rubbing them down smooth when fixed, in others firing them by heat or simply heating until they ran smoothly over the surface of the metal to which they adhered. The enamels which are to be obtained vary in substance, the beauty of their workmanship, and in their rarity and curio values. They cover the entire period of known art and although such enamels are widely distributed, the art of enamelling having been practised in almost all countries where art has flourished, some have won greater fame than others, many of these rare types

being easily distinguished by characteristic forms, colours, or designs.

Among the earlier exponents of enamelling were the Egyptians, the early Greeks, and to some extent the Romans. It would appear that enamelling was understood, too, in England, and was early practised as a British art, but it soon died out, to be restored again in this country under more favourable circumstances in the greater renaissance of mediæval art.

The enamels which have attained such great fame, and which are so keenly appreciated by connoisseurs, are those made at Limoges in Southern France, and again to a lesser extent in Italy and the Rhenish Provinces. Two beautiful examples of twelfth-century pricket candlesticks, now in the British Museum, are of that early form which, except for ecclesiastical purposes, soon gave way to the socket candlestick, a more convenient form for domestic use.

Processes of Enamelling.

The basis of most of the enamels on copper is a fusible silicate, or colourless glass mixed with metallic oxides, reduced to a fine powder, which is applied according to the skill of the artist. The metal, with the enamel powder upon it, is then fired until it is melted and adheres to the metal. The different treatments help the expert to distinguish the period when a specimen under investigation was made, and to some extent the place of its manufacture. There is the translucent enamel, which shows up the design through the vitreous matter, a

method originally adopted in Italy. Another process was that of applying different colours over an incised pattern, the figures or pictures being usually engraved in low relief. Coarser lines of engraving were used on the copper basis of the early enamels made at Limoges. Those of somewhat later date may be distinguished by the surface-painted enamels adopted in the later style, which flourished until about 1630. In this process dark enamel for the shadows was placed over the metal plate, the picture being painted in white with some portions in colour; a thin enamel surface was then given and the whole fired. The later surface-painted enamels were for the most part copies of well-known paintings or engravings, the colour or enamel being afterwards fixed by firing. In the process of enamelling known as champlevé the design was cut into the metal, the pattern or incisions made filled with colours, the enamels being then fused; the basis was nearly always of copper. The cloisonné enamel was generally on a brass basis, and as in the more recent examples from China and Japan, the cloisons or tiny cells of metal were filled with the right and appropriate colours; afterwards subjected to heat. In some cases the metal foundation is in the centre and cloisons or cells formed on either side of it. There is something about the *old* enamels of this type besides the wear and tear of centuries which distinguishes them from the more modern, which, generally speaking, are more brilliant in colouring, cruder and sharper in design, and without that beautiful tone which is so pleasing in the antique.

Chinese and Japanese Enamels.

The rarer examples of Chinese art date back to the beginning of the Ming period in 1368, continuing until its close in 1643. The charm of these early examples is at once recognizable when they are compared with others of a later date. Fig. 87 represents a large Ming bowl florally decorated in rich red, yellow, and white on a background of cobalt blue outside and turquoise blue within. Quite a different style of decoration is shown in Fig. 88; the design of butterflies and gourd-vine tracery being carried out in Pekin enamels in five colours. This remarkably fine box, so charmingly formed, contains a set of nine sweetmeat dishes, each one bordered with bats of cobalt blue on a lighter blue ground, on the cover of the outer box being the Shu monogram. Another splendid piece, represented in Fig. 89, is typical of a different style of decoration. This fine bowl, also of the Ming period, is florally enamelled, the inside showing the pattern outlined by wire cloisons upon a white ground, the flowers being worked in five colours. This bowl, which is four inches high, is represented in the illustration as standing on a beautifully carved stand of about equal height. These choice pieces are illustrated by the courtesy of Messrs. Glendining & Co., Ltd., at whose well-known London auction rooms they recently changed hands. The second great period of Chinese art is that of the Ching Dynasty, which commenced in 1644 and extended until more recent times. While to some extent the art and the decorative effect of that period was inferior to that of

FIG. 87.—BOWL OF THE MING PERIOD.

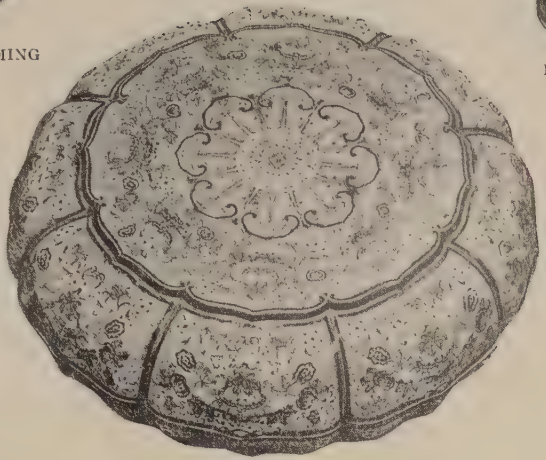


FIG. 88.—BOX OF PEKIN ENAMEL.

FIG. 89.—MING BOWL.

to-day, when judged from the present-day standard of modern art, there was a rare beauty about the old designs. The enamels of the Ching Dynasty were carefully prepared and placed, and the colouring soft and yet rich. The preparation of coloured matter by experts of that period when the best ceramics of China were made, has always been a subject of admiration and wonder to the potters and enamellers of more recent years. Examples of these charming wares are not exceptionally rare, among the collectable pieces being cups and bowls, exquisitely designed kettles, tiers of boxes, water vessels, round and oblong dishes, and incense burners. Some of the bowls with covers are of quaint forms, a favourite one being that of a peach. Vases of which the base is enamel are often further enriched by ornaments of copper-gilt. Among the rarer little curios seen in a representative collection may be mentioned small water droppers, mostly made in the eighteenth century.

The Ch'ien Lung period which followed extended from 1736 to 1796, and included many candlesticks and altar pieces as well as braziers, some of the copper vessels being practically encrusted with enamels, some of the finer ornamentation being attached to the ground-work as additional or supplementary decorative effects. As in the earlier periods much labour was expended on the production of the many fine temple sets which were presented to such uses. The exceptionally fine altar set wrought in cloisonné enamels, illustrated in Fig. 90, is of the Ch'ien Lung period, and consists of a beautifully designed koro,

supported on legs in the form of tigers' heads, two candlesticks 18 in. high, and a pair of vases. The style of decoration is very rich, being turquoise blue ground on which are floral designs in red, green, dark blue, yellow, and other bright colours. The pieces stand on brass-gilt foundations, which rest on carved wooden stands, the set forming an extremely interesting group, typical of the highest art of the Ch'ien Lung period. There are many richly ornamented and extremely valuable specimens of more recent date admired by connoisseurs of art in the galleries and curio-shops; but however beautiful they are the collector of the older curios appraises their values from a modern commercial standpoint, and does not view them as he would antiques.

British Enamels.

It was not until the art of enamelling had been perfected at Lillè and other places on the Continent of Europe, that an attempt was made to produce similar trinkets and a few more important pieces, such as candlesticks and inkstands, in this country. The works established at Battersea by Mr. S. T. Janssen about the middle of the eighteenth century soon gained notoriety, and it was not long before the enamels made there were eagerly sought after. In addition to those articles mentioned, they consisted chiefly of tea-canisters, snuff-boxes, spirit labels, and patchboxes, the copper being coated over with an opaque white enamel, which was coloured over and then decorated with floral and other designs. Rose tint afterwards became one of the favourite ground

colours at Battersea. Among the rarer examples may be classed inkstands and writing-table appointments. The inkstands usually include an ink-container, a pen-box, and a sand or pounce pot, for Battersea enamel inkstands were made before blotting-paper was invented, and the wet ink, chiefly applied with a quill pen, was dusted over with pounce to prevent blotting, and when dry the surplus was dusted off. The collector finds much to interest in the little patchboxes of enamel, of which there were many varieties. They remained useful when the fashion of wearing patches declined, for then they came in handy for cosmetics, salves, and pomades. These curious little boxes were frequently given by admirers and friends, as may be imagined from the mottoes and sentimental inscriptions upon them. Among the commoner varieties seen in a collection are little oval boxes on which are pictured two love-birds, sometimes accompanied by a bird's nest. Others will have imitations of needlework pictures, such as the fair ones worked in those days. Sometimes a little church is seen in the distance, and in the foreground a boy and girl exchanging love-tokens. "This gift is small, but love is all," is a favourite motto. "Virtue fair, manners sweet, Together in my fair one meet," are two oft-quoted lines, and another favourite verse is:

"I. you, my dear,
Accept of this,
Reward the giver
With a kiss."

Some boxes, however, have evidently been the gifts of those who could only claim "friendship" or acquaintance with the recipient, for they bear such sentiments as "A token of my respect," "Accept this as a token of my esteem," and "Esteem the giver." Some appear to have been made for sale as place souvenirs, for they are inscribed "A trifle from Bath," or other town where they had been procured. Battersea portrait placques were made between 1750 and 1760, among the favourite subjects being the then Prince of Wales (afterwards George IV), the Duke of Cumberland, and statesmen, among whom Horace Walpole was evidently one of the most popular.

English enamellers in other places, such as Bilston, attained some fame, but the Battersea works held their own, and not only produced the trinket boxes and other toilet-table appointments referred to, but many useful sundries, such as spirit and wine labels, little trays, and the like. None of these, although beautiful indeed, equalled the French enamels in the delicate miniature paintings and scenes such as those produced by the celebrated French painter, Petitot, who gave much attention to the decoration of exquisite toilet boxes and trinket trays.

FIG. 90.—FINE ALTAR SET OF CLOISONNÉ ENAMELS (CH'IEN LUNG PERIOD).

XIX

MISCELLANEOUS
METAL
CURIOS

CHAPTER XIX

MISCELLANEOUS METAL CURIOS

Tobacco-boxes and pipe-stoppers—Snuff-boxes—Handles and Handle-plates—Horse trappings—War relics—Tiny curios—Replicas.

THE collectable curios in metal include many which cannot be classified. They are isolated specimens of copper and brasswork representing some special household utensil or workshop appliance which, in the course of time, has become obsolete or has been superseded by more modern contrivances of other materials. Copper was almost exclusively used in works where acids and other chemicals prevented the use of iron until enamelled wares, aluminium, and zinc were available; but such workshop appliances are not usually very attractive, and seldom come within the scope of the collector except as museum specimens. Among the various sundry objects of interest, those mentioned in the following paragraphs are worthy of notice, especially as many of them are quite inexpensive, and can readily be obtained from curio-shops and occasionally picked up cheaply from cottages and farmhouses in out-of-the-way places.

Tobacco-boxes and Pipe-stoppers.

Smokers' sundries include many objects in brass, especially boxes for storing tobacco. Most of the larger receptacles for the storage of tobacco were in olden time of lead or pewter, or, in more recent times, of japanned tin, followed in the present day by pottery and wood. The small boxes in the days before rubber pouches were known were nearly always of brass or other metal, such boxes being often elaborately ornamented. Dutch metal-workers produced some very decorative boxes in the seventeenth century. In some instances the sides are made of copper and the covers or lids of brass, the two metals in contrast presenting a very pleasing appearance. Several of these boxes are to be seen in the Guildhall Museum; on one there is the representation of a bear-pit, on another scriptural subjects, a third being more appropriately covered with tavern scenes. Needless to say, Dutch artists were then—as they have been in after years—famous for their scenic views. The engravers appear to have divided their favours between religious pictures and rural scenes. Battles, too, came in for a share of the engraver's skill, and such pictures are noticeable on many of the larger boxes, some of which possibly were not used as tobacco-boxes. The picture scenes were continued until the close of the eighteenth century, and in some instances a few years in the next. Then there came a time of undecorated metal-work, and the engraving, if any, was stiff and formal. Ornamental borders came into vogue, and the more elaborate boxes were engraved with the crests or

monograms of their owners. Some show portraits, such as an eighteenth-century box on which is a portrait of Frederick the Great.

The metal-work so freely imported into this country in the reign of William and Mary, and on into the times of George III, of course included many tobacco-boxes, but there are other pieces of those periods, the uses of which are uncertain; some of the long, narrow boxes were probably made for spectacle-cases, and others as cases or boxes for the money-changers' and traders' scales (see Chapter XI).

Ash-trays of copper and brass, among the fanciful smokers' requisites of the present day, are by no means novel, for among the antiques in metal are found curious copper bowls with inverted feet and wooden handles which were used by smokers in the days when "churchwarden" pipes were mostly smoked; they were known as smokers' ashes pans.

Tobacco-stoppers of metal are of early date, and seem to have been regarded by metal-workers as peculiarly suitable objects on which to display skill in modelling and even engraving. An authentic record of their use in Restoration days is met with in a will referring to a bequest of Boscobel relics: "The owner of an old oak box, dated 1660, mentioned it as the 'one in which was a brass tobacco-stopper.'" Of these curious and interesting stoppers there are many varieties. Under Dutch influence some striking characters were portrayed as the ornamental heads of these pieces. In the days of William and Mary they were chiefly cast,

and afterwards tooled and even engraved. James II was chosen as the model of many; and stoppers with his bust as the handle were, it is said, treasured by Jacobean admirers. The human hand in which is seen a "churchwarden" pipe is a favourite type; pugilists, too, figured, and others typified familiar objects of local fame, even animals, birds, and domestic utensils serving the purpose of the designer. In recent days "Punch" has appeared, and among the modern replicas of "early types" (*sic*) to be seen in the shops are sets of Dickens's characters as tobacco-stoppers.

Snuff-boxes.

There are some of the so-called tobacco-boxes which no doubt were in reality used only for snuff in the days when snuff was taken in larger quantities than it is to-day. A collection of snuff-boxes includes many varieties, among which are some of metal. Some of the boxes made of wood and of shagreen are decorated with tiny brass studs, producing a very pleasing effect. The snuff-boxes were shaped according to popular fancy, and some of the more eccentric patterns were local in their use. In Scotland the curled-shaped mull was a favourite. In connection with snuff-taking it must be remembered that in the earlier days snuff as prepared now was little known. Those addicted to the habit had to prepare their own snuff. For that purpose there came into vogue snuff-rasps of iron enclosed in cases, which, although they were in some instances of boxwood or carved pearwood, were now and then

of metal. Incidentally this early home preparation of the snuff produced from a small plug or twist of tobacco gave rise to the popular trader's sign of the "Crown and Rasp" over a tobacco shop. As intimated in another chapter, many of the tobacco and snuff-boxes served a dual purpose, and not infrequently formed part of the tinder box, an essential in early days.

Handles and Handle-plates.

The condition of the metal-work upon old furniture and other curios is a factor in its beauty and in its value too. The handles and handle-plates should be of the same period as the antique, and hinges, lock-plates, handles and their plates, ball feet and castors should be *en suite*. Indeed, it is better to substantiate a well-made reproduction rather than to admit the use of a later style. The want of harmony in the "brass furniture" of antiques, although all portions appear old, is somewhat puzzling at times. It is explainable in that in early Victorian days when much that was then old was repaired the village shopkeeper and even the cabinet-maker had little regard for the preservation of the old style. To restore meant to them to repair, and where necessary to introduce the *then* prevailing materials notwithstanding their obvious inappropriateness.

Fortunately, dealers in antiques and restorers have acquired nowadays a genuine love of their work, and have learned how best to please their clients; many of them having quite a store of odd handles

and fittings for the curio-hunter and would-be amateur restorer to choose from. To be quite certain about getting a suitable style for the restoration or repairs of old furniture it is desirable to know something of the appropriate styles. The drop handle is a foreign importation, for it is said to have come from Japan, being first seen in this country in the Oriental lacquer cabinets brought here in the seventeenth century. Such handles were at first pear-shaped, but they soon became larger and of a type more adapted for drawers and the heavier furniture then in use. Much hand labour was expended upon their manufacture; even in the latter part of the eighteenth century they were filed up by hand. The earliest form of brass handle-plate was the smooth and shiny "willow brass," the edges of which were filed and shaped by hand. Later they were distinguished from the newer styles as "Queen Ann brasses." The handles were fastened to the plates with brass-headed screw bolts (in the commoner types the "plates" were dispensed with). Chippendale and his followers used an adaptation of the willow brass, placing over the plain plate a fretwork grille or ornamental plate of thin brass. Then came the bail handle and the oval plate with beaded ornamentation, adopted by Hepplewhite and Adams. In the meantime, however, the drop and the bail were made in a fancy design in keeping with Chippendale "shells" and ornament. The rosette and ring handle of the year 1800 and onwards is a feature to be noticed, the round plate being pierced in the centre

instead of at the sides as in the bail handle. The ring which formed the handle hung from the central screw. This got over the difficulty of the necessary groove in which the old bail handle had fallen, and allowed for a deeper projection and more ornamental stamping. Such handles were in vogue in the Empire period. There were heavier handles, too, which often took the form of a lion's head instead of an ornamental pattern, the ring hanging from the mouth of the lion, these being often miniature replicas of the brass door knocker. These beautiful handles and the delightful brass knockers which were used on furniture and doors concurrently gave way to the ugly handles of the Victorian age, when wood and glass knobs reigned supreme. It was a sad picture of the decadence of popular taste, for there can be no question as to the more artistic and ornamental decorativeness of the brassfounder's art over that of the wood-turner as exemplified by the products of the nineteenth century.

At the time when the different styles in furniture decoration influenced brasswork, including handles, knobs, lock-plates, and hinges, a gradual change was going on in the castors used on furniture. The square legs required a square-socketed castor; then came the cabrioles or brass collars to the castors, very ornamental and suitable to the style of the shaped legs of mahogany furniture ornamented by carving and curiously turned. The runners of the castors were chiefly of brass and generally very substantial. The brass wheels held sway until the invention of the vitrified bowl, which seemed to

harmonize better with Victorian mahogany. In restoration work the collector should see to it that the castors used are in keeping with the furniture, for if no genuine antiques are available there are modern replicas of all the styles.

Horse Trappings.

Horse harness is heavily loaded with brass bands, buckles, chains, and "trappings," many of the latter appearing to be quite superfluous and unnecessary. It would seem that the fanciful frets of perforated brass were introduced from purely artistic motives. That, however, is not quite correct, for even the brass ornaments of to-day are chiefly replicas of more ancient trappings, and although their forms may have deviated somewhat, the ancient idea is quite recognizable, and agriculturists and stablemen still demand their retention. Such brasses, which now make up so entertaining a collection, have meanings; indeed, in the earlier examples the designs are true to well-understood symbols which may or may not in their use have a beneficial influence. To the superstitious they are not merely trappings; they are charms of real purpose (see Fig. 91).

In all parts of the country there is a lingering superstition which aids and abets the continuance of the use of amulets. Indeed, the very general belief in the protective value of symbols, the true history and origin of which may have been forgotten, is truly astonishing. One of the most remarkable indications that old fables and beliefs, antedating in their origin the introduction of the Christian

FIG. 91.—COLLECTION OF BRASS AMULETS (HARNESS BRASSES).

(*In the possession of Mr. Chas. Wayte, of Edenbridge.*)

religion in this country, have a hold still on rural districts, is seen in the brass harness trappings used by all classes alike. Years ago the makers of harness fashioned their brasses with care, and the artists who engraved them and cut them out of solid plates of metal laboured long and tediously in producing exact replicas of similar ornaments which had been used from time immemorial. They rarely deviated from the emblems they copied to any material extent, although new designs were at times added, based possibly on some specific local emblem which was then gaining notoriety.

Then came the less expensive processes of reproduction by casting and stamping, which multiplied the designs and very often made them grotesque in the eyes of experts and those who had been accustomed to realize and understand a true meaning in the designs they had been familiar with.

The ornamental brasses which hung in rows round horses' necks, and conspicuously on the foreheads or chests of the animals, deemed inseparable from a set of harness in olden times, were regarded as charms, protective against danger, accident, and, in wilder times, perils unknown to-day.

These very pleasing objects in brass, which look so handsome when polished and arranged on a cloth-covered shield in the harness-room, or, perchance, framed as a trophy for the hall or gun-room, are so varied, and yet for the most part quite distinct, that it is said nearly two hundred designs are collectable. A complete set of brasses, as worn by one horse properly harnessed, includes the face brass

already mentioned as the chief ornament on the forehead, ear-brasses hanging behind the ears, three brasses on each side of the shoulders, and ten martingale (a strap passing from the horse's girth between his forelegs) brasses for the breast. To trace their purport and hence their forms it may be pointed out that they are associated with the folk-lore of the districts where they were originally used, and were chiefly intended to keep off the "Evil Eye" or calamity. They go back a long way into the past, and are nearly all attributable to symbols understood by the Saxons, early British, and still older races. Their modern exponents are the gypsies, and strange as it may seem, most of them are either Buddhist, Egyptian, or Moorish. The genuine antiques include such well-known emblems as the crescent, the symbol brought back, it is said, by the Crusaders from Eastern lands. The crescent moon, like the horseshoe brass, is valued. There are others showing the radiated sun's rays indicating the sun worship of our ancestors. Conspicuous among the floral emblems may be noticed the iris; the lotus of Egypt is a common emblem, often enclosed in a crescent-like form, occasionally met with in a shield-like frame. There are the bull's head with horns and the horse of the Saxon banner, both essentially English types. Then there are clubs and diamonds, hearts and spades, and many heathen symbols. In a few instances brasses in the shape of crosses are met with, but these are rare; possibly they were introduced in the days of the Canterbury pilgrims. In this connection may be related a pretty

story of the good luck associated with the horseshoe, which comes from Russia, where peasants used to paint a picture of the Virgin Mary with a golden halo round her head outside their doors to protect them from harm. The snows and the rains washed off the paint, but left the more lasting gilding in the shape of the horseshoe. Hence it is said the superstitious legend of the protective power or good luck of the symbolical horseshoe, or the crescent moon, is spread all the world over. Another legend tells us how the Greeks and Romans gave the world the crescent moon as an emblem of good luck, so many thousands of replicas of which have been fashioned in brass and used as horse trappings by horsemen of all races. The crescent moon was to those nations the symbol of their loyalty to the huntress Diana, the goddess they worshipped as a protector under many varied conditions.

An exceptionally fine early brass of crescent form is seen in South Kensington, where there are other early specimens pointing to the ancient and very general acceptance of the belief in the potency of symbolical horse trappings as talismans against evil and dangers of the road, happily unknown now. Almost as common is the brass fashioned like the sun god, whose face was so often looked upon with awe by the ancients. Side by side with these pagan symbols the emblems adapted by pilgrims in days when Christianity had been made the religion of the race can be seen to-day, still adorning the breast of the horse.

The amulet or charm is not altogether banished at the present day. It has been worn at the watch chain, round the neck, on a bangle, and suspended from the chatelaine or the girdle. The greater use of the road by motorist and cyclist has once more brought into prominence the amulet or mascot, carried in front of the rider. The river-girl places a mascot on the prow of her boat, and the aviator screws his mascot into position "for luck." Why this should be done we cannot tell; the general belief is in some mysterious advantage from the presence of the mascot—an accepted theory by the sceptical man who shakes his head and secretly marvels at the folly of the belief.

Strange to say many of the present-day mascots in brass—and that is the favourite metal—are modelled upon amulets such as we have referred to as finding their origin in pagan faiths. There are others used by motorists, such as "Cæsar," the late King Edward's dog, the "Chantecler," and the stag's head, which have no mystic meanings; on the other hand, the most favoured are such brasses as the "star and cresent" and the "rising sun" of pagan worship of our ancestors, and "Mercury" the Greek god.

The brass mascot used in every form, large and small, by motorists and worn by many others so extensively is the "Swastika" of Buddhist fame, traceable in its varied form to Egyptian and other early nations. These mascots in brass, made in thousands to-day, are brass curios in the making; possibly in a century or so they may be classed with

the oldest brass amulets described in this chapter, and so add to the metal relics to be collected by future curio-hunters!

Copper Sheathing and Nails.

Copper sheathing has been used by boat-builders and made to serve a useful purpose, protecting the ship's bottom and resisting the action of salt water. Oftentimes this valuable material—costly when new—has been used over again when vessels have been broken up, and not infrequently it is put to curious uses in old seaport towns. Visitors to an old-world village built on the side of a hill near the sea in North Cornwall, have looked with admiration upon two remarkable gateposts in front of a cottage house, and admired their quaint carvings. These relics in oak were once the ends of seats in a neighbouring parish church; but either to preserve them from injury from the village children or to give them a longer life as they would be exposed to the weather, the upper portions have been sheathed with copper from the bottom of some broken-up wreck, and large copper nails keep the casing in place. Copper and brass nails have been used for ornament as well as to resist acids and other metal-destroying chemicals. Old furniture is evidence of this; for at one time the leather covers to the chairs were almost invariably fixed by round-headed brass studs, which from that use became known in the trade as "chair nails." Such nails were used to ornament brass bellows and other domestic utensils. They were also used to "decorate" the skin-covered

trunks which our ancestors took with them on their rare journeys of pleasure or business, when they travelled by the mail-coach or less expensive stage wagon. Nails of brass have been used and are still sometimes used for sadder purposes, for they are a feature in the ornament of cloth-covered coffins. That of King Edward VI was decorated (*sic*) with upwards of two thousand brass nails with gilt heads.

War Relics.

What wonderful antiquities are sometimes found among scraps! Years of neglect cause indifference to the contents of a scrapheap, and we read occasionally of the dispersal of relics among which, unknown to either sellers or buyers, there may be antiquities of more than passing interest if their original ownership could only be traced, for in the personal relics of great warriors in our national museums there clings a halo of hero-worship, and what to many would be considered fictitious values are attached to such curios. A few years ago the relics from the battlefield of Waterloo, which had for some time past been accumulated in a modest looking building at the foot of the Lion Mound, were dispersed. There were upwards of three thousand pieces, including helmets of brass, plates of shining metal, innumerable buttons and ornaments belonging to different French regiments, including officers' regimentals, and some relics of the British and Prussian armies. In old curio-shops many metal relics of battlefields are offered for sale, but they have little or no interest to the buyer, simply

because their identity with their original owners has been lost. It is of the greatest importance to future generations of collectors that all records relating to known curios should be chronicled, and that even private collectors should hand on to their successors adequate descriptions which may have been verbally given them, so that private as well as national relics may be identified and the monetary value in such curios increased. Even a brass plate on an old gun, bearing the name of a great man, makes it a relic worth securing, whereas had the identity of ownership been missing the weapon would be of little or no value.

A visit to the United Service Museum at Westminster is full of interest. There is an abundance of personal relics there—not many of brass, it is true—many of which are of special interest. Perhaps the one of greatest historical fame is the much battered copper bugle on which it is said the signal was given for the fatal charge of the Light Brigade at Balaclava, resulting so disastrously to that famous regiment. There are some curious trophies of brass, too, which have been brought home by our troops; one known as "Jingling Johnny" is of special interest.

Tiny Curios.

At one time there was quite a rage for miniatures in metal-work. Artists in copper and brass vied with one another in working microscopically. They were very fond of making use of some recognized piece of metal, the size, weight, and substance of

which was well understood by the public; hence the difficulties of manipulating the works of art they produced would be realized. Thus, out of a copper farthing, a worker in metal would with very tiny hammers and a still smaller soldering-iron and miniature blow-pipe, fashion a complete copper tea-kettle with a tiny spout out of which liquid could be poured, a loose lid, a correctly formed knob, and a beautifully shaped handle. Another would make a similar kettle out of a similar piece of metal, and leave some portion of the farthing, perhaps the date, uninjured as the central ornament on the side of the kettle, or on the top of the handle; others would add a stand, like the then fashionable toddy-kettles and stands. In a similar way other little domestic utensils were made by the worker in copper, who used watchmakers' hammers and tools such as jewellers employed in the setting of precious stones. A collector at one time had in his possession a beautifully shaped coffee boiler of the type used on the open fire when coffee was boiled and afterwards allowed to stand on the hob for some time before it was deemed sufficiently brewed. Another charming miniature novelty was a brass stool, perforated, and made to revolve just as the larger toasting stool once common in every fireplace. Fenders and fire-brasses were favourite objects for miniature metal ornaments, and the way in which the skilled worker manipulated the copper "sheets" hammered out by hand from small coins showed mastery of the craft and great patience. Such little objects were frequently displayed on the "parlour"

table under a glass shade, the woodworker being sometimes requisitioned to make a stand, possibly a canopied top, on which to show off to the best advantage these tiny ornaments.

In the same way the engraver of brass and copper worked under a strong lens, and sought to produce whole texts of Scripture and quite long inscriptions on an almost impossibly small surface. These little pieces of metal were worn as charms, and similar objects were displayed as trophies. Many of our readers have seen no doubt the whole of the Lord's Prayer or the Ten Commandments engraved on a threepenny-piece or a copper farthing. It is said such microscopic engraving took its rise in the reign of Charles II when Thomas Simon, a noted engraver of the Mint, engraved in double lines on his famous "Petition Crown" a petition to the king. Specimens of the crown are very rare, and are regarded as the scarcest treasures in a numismatic cabinet.

Replicas.

In conclusion, it may be pointed out that there is no branch of curio collecting which has such a close and intimate touch with modern art as that of copper and brass. The tools with which the ancient coppersmiths wrought and fashioned their most beautiful works are still used by the coppersmiths of to-day, for although in the eyes of some the traces of machine-stamped or pressed ornament in the so-called reproductions of the antiques are noticeable blemishes, there are few distinguishing marks between the old

and the new. Those modern artists who specialize in providing those who furnish their houses in antique style with replicas of the domestic copper-work of a century or two ago, are very careful to produce their "modern antique" by the use of tools which produce precisely similar effects to the hammered-by-hand copper-work of days gone by. In the production of such work the repoussé enrichments are wrought by hand, the anvil still holding sway in the modern coppersmith's shop. Rarely is soldering used, the parts being riveted together. In many cases although jardinieres and other vessels have the appearance of being cast in a mould they are really hollowed up under the rim by hammer and block, and are without seam or joining. They are fashioned exactly the same way as the beaten work of old. Collectors may be warned against these modern reproductions in that they should be careful to pay a modern price for a modern antique.

The styles reproduced are chiefly those of the sixteenth and seventeenth centuries, particularly those of the Elizabethan and Cromwellian periods. Thus electroliers are made to match antique furniture, the difference being that instead of holding electric bulbs the antique would have been fashioned for candles or oil lamps. Many of the modern reproductions of copper panels used for letting into mantelpieces are designs, carefully copied, taken from old baronial halls. The very grates of ormolu and brass and the canopies of hammered copper and brass are being made to-day by the same firms who manufactured the metal-work designed by the Adam

Brothers, and who in the eighteenth century had already become famous as makers of coal stoves and hob-grates. Then, again, in the utilitarian reproductions of to-day there are the copper and brass fender kerbs, reproducing the eighteenth-century fenders without their bottom plates, and for use with them the modern manufacturer makes fire-dogs and fire-brasses of antique styles. Even the builder's brass-work for ornamenting the interiors of houses, such as finger-plates and door handles, are exact copies of the old door-plates and lock-plates found on doors and cupboards in existing houses built in the seventeenth and eighteenth centuries, and in their designs and processes of manufacture it is difficult to distinguish the genuine antique from the modern replica. Again, the buyer of such things is warned against the unscrupulous dealer who fills his windows with brass and copper-work, almost hot from the Birmingham foundry, and labels it "Antique." Not long ago some of the shop windows were filled with chestnut roasters in brass, with beautifully designed trivets, with door knockers innumerable, and with even pipe-stoppers and tobacco-boxes, all quite recently made in the Black Country. Yet all these objects, sold as modern by the honest dealer, have been and are still not infrequently palmed off as antique, for they have the finish which age in former years was wont to impart, and in design and style they are correct reproductions of the genuine antique.

The collection of metal has a peculiar charm, for the objects are so numerous and the different alloys produce such a pleasing variety of colour and appear-

ance. The value of such curios is now more fully recognized than formerly, for greater prominence is being given to them in museums, where in those which have been re-arranged recently such objects may be seen with labels on which their uses are fully described and explained.

XX

WRINKLES FOR COLLECTORS

CHAPTER XX

WRINKLES FOR COLLECTORS

Cleaning copper and brass—Lacquering metal—Polishing brass—Restoring antique finishes—Using the burnisher—Brass rubbings.

THE collector has frequently to decide whether he will entrust the repair of some much battered curio to a local workman or undertake the rôle of an amateur worker and repairer of copper or brass. There are many who prefer the latter course; unless the antique needs expert skill, and then, if a valuable specimen, it should be sent to one whose professional knowledge will enable him to carry out its restoration without injury. There are, however, many minor matters which, with a few simple tools, and recipes which can be prepared quite easily, the collector can very satisfactorily accomplish.

Before attempting to clean or repair old copper and brass curios or those objects which are made all or in part of either of them or of any of their alloys, it is well to know something of the constituents of the metals usually met with. First on the list comes ancient bronzes composed mainly of copper and tin on no accepted formula, but generally in the propor-

tion of about three to one. Modern statuary bronze is made in several proportions; one compound is given by an authority as copper, 83 parts; tin, 5 parts; zinc, 10 parts; and lead, 2 parts; and by another as copper, 91 parts; tin, 9 parts. Bronze ornaments are mostly copper, 80 parts; tin, 3 parts; zinc, 15 parts; and lead, 2 parts. Gongs are of copper, 80 parts; and tin, 20 parts—some Oriental alloys have a little silver added. The ormolu of the brassfounder, used extensively by French metal-workers, has more copper and less zinc than brass. Red brass consists of copper, 25 parts; zinc, 5 parts; and bismuth, 1 part. Yellow brass is made of copper, 35 parts; and zinc, 15 parts. Pinchbeck metal, of which watchcases and jewellery have been made, consists of copper, 10 parts; and of zinc, 2 parts. Antimony imparts a rich red to copper.

In the following paragraphs some very useful "wrinkles" are given:

Cleaning Copper and Brass.

It is scarcely necessary to warn the collector against over cleaning, for to rub light bronzes which age has toned or encrusted with a beautiful patina would be vandalism indeed. Yet there are many objects which require attention when they arrive from the auction mart or curio-shop. Ancient bronzes should be washed in soap and water with soft brush or flannel —not scrubbed—and then dried in hot sawdust. If any polishing is necessary, a chamois leather or an old silk handkerchief will be sufficient.

The green patina or verdigris of antique metals should *not* be removed nor its colouring spoiled with cleaning.

Copper vessels, however, do very frequently require cleaning. When they have turned a bluish green—not the much admired patina—they may be cleaned by making a paste of well powdered chalk and methylated spirit. This preparation should be rubbed on and then left until the spirit has evaporated and the chalk is quite dry, at which stage it can be removed and the copper polished with crocus powder or fine chalk.

Owing to long neglect there are some metal curios which cannot be thoroughly cleansed without a powerful solvent. A weak solution of oxalic acid may be safely applied with a piece of woollen material; it will remove the tarnish, and then, after well washing, the metal can be polished with fine chalk or whiting. When the brass is spotted with damp but not too deeply marked, chalk and spirits of turpentine will generally effect the purpose just as well.

Another recipe formerly much favoured by housewives in the days when copper vessels were much in evidence, is to rub them over with half a lemon dipped in salt; then after washing polish with a soft cloth. This is a useful recipe in that it does not injure an antique appearance or patina, but it will remove stains.

A somewhat more powerful preparation for metalwork is a cleaning paste made as follows: Oxalic acid, 1 oz.; rotten stone, 6 oz.; gum arabic, ½ oz.;

sweet oil, 1 oz.; and then add as much water as necessary.

The following recipe is given for the benefit of advanced collectors who wish to avail themselves of modern methods. Such will no doubt delight in experimenting on the cleansing of newly acquired curios with a cleaning preparation operated by an electric current. Caustic soda, ½ lb.; sal soda, ½ lb.; resin, ¼ oz.; and water, 1 gallon; 4 to 8 volts and a current density of 12 amps. The greater the density of the current the quicker the cleaning is performed. A temperature of 120 Fahr. is recommended.

Lacquering Metal.

When it is desired to lacquer or coat over metal to prevent any future oxidation (not commonly desired by collectors of antiques) the copper or brass article should be pickled for several hours in aqua fortis diluted with water. The acid will rot away a certain portion of the tarnished surface and leave the metal bright. The article should then be put into bran and well shaken until quite dry. It is then ready to be cleaned, and, if desired, polished bright.

Old brasswork may be relacquered by the amateur with a little experience, practice, and care. First of all it must be cleaned. The liquid which is best suited to the purpose may be made of a strong lye of wood ashes boiled and strengthened with soap lees. This will fetch the old lacquer off. The article should then be dipped in aqua fortis and water to

take off the dirt, and immediately removed and cleansed with clean water, and then when dried it is ready to be lacquered. There are two processes in simple lacquering, which may be defined as cold and hot. The cold lacquer is the application of a preparation of brass lacquer, which can be purchased from any oil-shop, chemist, or metal dealer, put on with a camelhair-brush like varnish, and immediately placed in an oven or a hot stove, and exposed to the heat for a few minutes until the lacquer is quite firm and set. A gas-oven such as those in common use in so many kitchens nowadays answers the purpose very well.

The second method is the application of lacquer after the article has been heated. The heating may be done in a gas-oven, or by the application of a flat-iron such as is used by laundresses. Then lacquer should be applied hot, and if the object lacquered has cooled in the process heat should again be applied as in the first process. It should be clearly understood that cleaning and relacquering old brass and copper-work should be done with very great care and with a full appreciation of the curio value of old finish, and of the marks and evidences of age which are so dear to the collector. The pickling of brasswork in acid and subsequent lacquering should only be resorted to when it is absolutely necessary to effect such restoration, and to make the objects sufficiently presentable so that they may be included in a cabinet or exhibited in the collection of metal curios; for the possession of old copper and brass is nothing without the oppor-

tunity of showing it. There are some specialists who devote their attention to the restoration and bronzing of mediæval and early ecclesiastical work. It may on occasion be necessary to consult such a firm before attempting anything which would savour of vandalism and rob the present-day possessor and curio-hunter of the future of what might eventually become a rare antiquity.

Polishing Brass.

It may at times be necessary to polish parts of curios which have been subjected to rough wear and are, therefore, badly scratched. A very fine file will remove scratches; fine emery will then make the surface quite smooth, after which it can be polished with rotten stone and oil, some adding a little turpentine.

Restoring Antique Finishes.

There are many beautiful antiques which have been subjected to rough usage or through some accident have had the oxidation rubbed off in parts. To clean such an antique so as to secure uniformity of appearance would be a mistake. It is better to "restore" the finish and imitate that which age has imparted. The solution required is 60 gr. nitrate of silver and $2\frac{1}{2}$ oz. water, mixed with a solution of 60 gr. nitrate of copper and $2\frac{1}{2}$ oz. water. After the solution has been applied to the parts the object should be heated in a gas-oven until it is sufficiently dark coloured.

Some time ago an expert in Indian antiques,

bronzes, and metal-work published in *The Times of India* an account of how Oriental bronze and brass which had been soiled and scratched by time and climatic conditions might be restored. The writer went on to describe how the great secret of restoring the dull half-green and half-brown shades had been revealed to him. The remedy he propounded was simple in the extreme. It was that the statue should be washed in beer, which should not be rubbed off but allowed to dry on.

Using the Burnisher.

The amateur restorer may frequently with advantage acquire a knowledge of the burnisher, and thereby add much to the beauty of the metal. Those who have watched an old coppersmith planishing copper-work, and have noticed the very primitive materials used, will have learnt to realize the value of "elbow grease." Crocus powder with oil and soft rags works wonders, and will often bring up the original finish just as the coppersmith converts the rough dull polish of the metal sheets he has fashioned into domestic copper ware and shining pots and pans.

Brass Rubbings.

Rubbings of church and memorial brasses referred to in Chapter VII may be taken with heel-ball, which is a compound of beeswax, and plain white paper. When the brass has been evenly rubbed all over the picture is complete and ready for mounting. It should then be cut out and pasted on a prepared

surface of fine canvas or calico, thus giving the rubbing an appearance like tapestry. It can be touched up in colours, if there is any heraldic enamelled work on the original. It can then be sized and stretched on a frame ready for hanging on a wall.

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